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# AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

SATURDAY, AUGUST 16, 1856.

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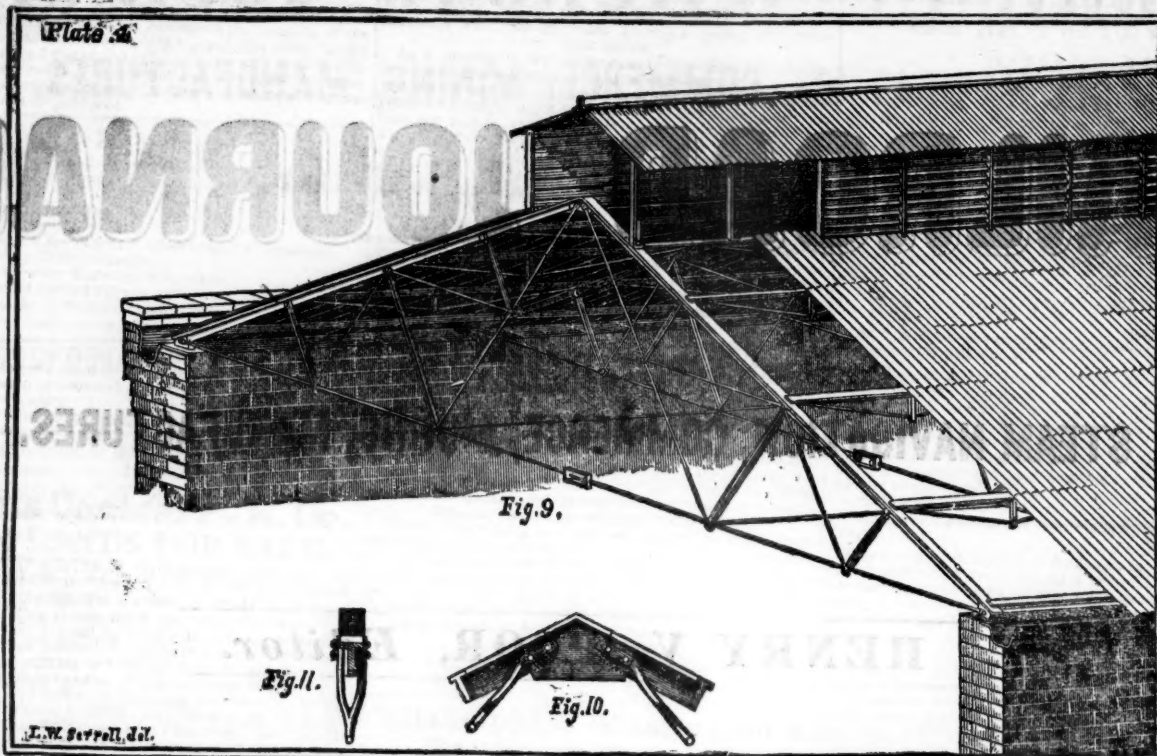
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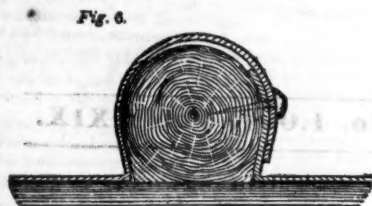


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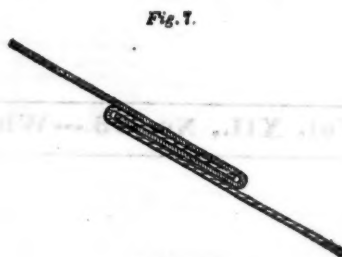
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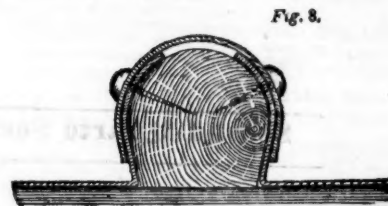
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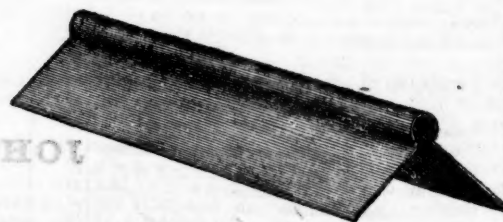
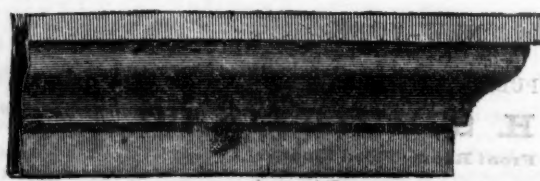


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[WHOLE No. 1,061, VOL. XXIX.]

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## American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, August 16, 1856.

### Pacific Railroad.

Below we give the report of the Special Committee of the House of Representatives on the subject of the Pacific railroad—having already given the minority report of Mr. Wood.

The Select Committee to whom was referred the bill to provide for the establishment of a railroad and telegraph communication between the Atlantic States and the Pacific Ocean, and for other purposes, beg leave to make the following report:

The necessity which exists for constructing lines of railroad and telegraph communication between the Atlantic and Pacific coasts, is no longer a question for argument. It is conceded by every one, that in order to maintain our present position on the Pacific, we must have some more speedy and direct means of intercourse than is at present afforded by the route through the possessions of a foreign power.

The importance of our Pacific possessions is felt in every pursuit and in every relation of life. The gold of California has furnished the merchant and trader with a capital by which enterprises have been undertaken and accomplished which were before deemed impracticable. Our commercial marine has been nearly doubled since 1848; internal improvements have been pushed forward with astonishing rapidity; the value of every kind of property has been doubled, and the evid-

ence of prosperity and thrift are everywhere to be seen. The security and protection of that country from whence have been emanated nearly all these satisfactory results, is of the greatest importance; and that can be accomplished only by direct and easy communication through our own territories. Railroads will effect this. At present we are forced to resort to a very circuitous route by sea, through the tropics and across the continent at a most sickly point in the torrid zone. Should a war break out between our country and any other maritime power, or should a difficulty arise with one of the petty Spanish American States through which these routes lie, our communications would be interrupted and the unity of our confederacy actually broken up.

Looking to these facts alone to secure the construction of these lines of communication, has given them such an importance as never attached to any work of internal improvement since the time when, during President Jefferson's administration it was thought necessary to connect the States lying on the Atlantic seaboard with the States lying in the valley of the Mississippi by means of roads across the Alleghany mountains. Insignificant as the undertaking of the building of a wagon road across the Alleghanies may appear now, the proposition was then deemed exceedingly difficult, and occupied quite as much of the public attention as the Pacific railroad does at the present time. The States were then separated only by the mountain range of the Alleghanies, but the western country was so remote, and access to it so difficult, that the construction of a road was considered absolutely necessary, and sufficient to authorize the earnest attention of Congress. The people of the western frontier were at that time exposed to frequent incursions of the Indians. The country was exceedingly fertile, but the markets were so distant that the production was rather an incumbrance than a profit to the farmer, and vast tracts of rich agricultural land were suffered to remain an unbroken waste. The action of the Government attracted public attention and awakened private enterprise. Canals were projected, and then followed railroads, until every part of that country which was but a few years ago called the "Far West" has been brought within three or four days' communication with the cities on the seaboard, giving a new impulse to commerce, increasing the value of property, and relieving the frontiers from all the dangers of a hostile foe. No better example can be given of the benefits resulting from the construction of railroads to both public and private property, than that of the Illinois Central railroad. On the line of that road the public lands had been offered for sale for many years without finding a purchaser, and were at last reduced to the lowest minimum price, 12½ cents per acre. Even this

reduction was not sufficient to induce their sale; but when the Government had given away one-half to assist in building the road, the other half was very readily sold for \$2.50 per acre. Similar results have followed the building of nearly every railroad in the country, although in many instances, as in this, the roads came in direct competition with river and canal transportation.

A railroad across the continent would open up a vast extent of country to settlement, and much of what is now believed to be sterile and barren will, no doubt, (as in California,) be found to yield bountifully to the agriculturist.

These lands are now totally without virtue, no matter how fertile they may be, and to the Government worthless. By giving away one-half for the construction of the proposed roads, the Government will thereby attach a value to the remainder, and whatever that value may be will be the amount the Government is gainer by the transaction. Your committee have not thought proper to step aside from the long established system of the Government, in granting lands to aid in the construction of the railroads under consideration, except incidentally in the payment for transportation of troops, munitions of war, &c., and for carrying the mails; at the same time, they have endeavored to extend to every portion of the country an equal share of the benefits to be derived from it. Every part of the country, extending from Lake Superior to the Gulf of Mexico, is brought in direct contact with one or the other of the proposed roads, and from the western frontiers of the States lying west of the Mississippi, connections are easily made with roads already completed to the cities on the Atlantic seaboard.

By thus combining all the great interests of the country, an effort has been made to allay sectional jealousies and to bind together more firmly every part of the country.

The policy of granting lands, or the proceeds of the sales thereof, for the purposes of internal improvement, and to increase the value of public property, was early adopted by our Government. By the act of April 30, 1802, one-twentieth of the net proceeds from the sales of the public lands lying within the State of Ohio, was set apart to "be applied to the laying out and making public roads leading from the navigable waters emptying into the Atlantic to the Ohio, to the said State and through the same," such roads to be laid out under the authority of Congress "with the consent of the several States through which the road shall pass." By the act of May 1, 1802, it is provided that it shall and may be lawful for the Secretary of the Treasury to cause to be viewed, marked and opened, such roads within the territory northwest of Ohio, as in his opinion may best serve to promote the sales of the public lands in future. Both these acts were approved by Mr.



Jefferson, and form the basis on which all similar acts have been predicated. Every Executive since that time have approved of similar acts, and the only change made was in the manner of making the grant, the lands having been given instead of the net proceeds of the sales thereof. The plan thus proposed precludes the necessity of entering into an estimate of the expenses to be incurred in constructing any of the proposed roads. Nor does it matter how many of the roads are thus authorized to be constructed. If built, they will open up a vast extent of country to settlement, and thus the Government and the people will be mutually benefitted. If the roads should not be built within the time specified, the lands revert to the Government, and the parties take nothing by the grant. Nothing is given without a corresponding benefit to accrue. As a means of military defense, the Secretary of War, in his last annual report, has placed this measure in such a strong point that your committee have thought proper to make the following extract. Alluding to our Pacific possessions, he says:

This Territory is not more remote from the principal European States, than from those parts of our own country whence it would derive its military supplies, and some of those States have colonies and possessions on the Pacific, which would greatly facilitate their operations against it. With these advantages, and those which the attacking force always has of choice of time and place, an enemy possessing a considerable military marine could, with comparatively little cost to himself, subject us to enormous expenses, in giving to our Pacific frontier that protection which it is the duty of the General Government to afford.

In the first years of a war with any great maritime power, the communication by sea could not be relied upon for the transportation of supplies from the Atlantic to the Pacific States. Our naval peace establishment would not furnish adequate convoys for the number of storeships which it would be necessary to employ; and storeships alone, laden with supplies, could not undertake a voyage of twenty thousand miles, passing numerous neutral ports, where an enemy's armed vessels, even of the smallest size, might lie in wait to intercept them.

The only line of communication, then, would be overland; and by this it would be impracticable, with any means heretofore used, to furnish the amount of supplies required for the defense of the Pacific frontier. At the present prices over the best part of this route, the expense of land transportation alone, for the annual supplies of provisions, clothing, camp equipment and ammunition for such an army as it would be necessary to maintain there, would exceed \$20,000,000; and to maintain troops and carry on defensive operations under those circumstances, the expense per man would be six times greater than it is now; the land transportation of each field twelve pounder, with a dne supply of ammunition for one year, would cost \$8,500; of each twenty-four pounder and ammunition \$9,000, and of a sea-coast gun and ammunition \$12,000. The transportation of ammunition for a year for 1,000 sea coast guns would cost \$10,000,000. But the expense of transportation would be vastly increased by a war; and at the rates that were paid on the northern frontier during the last war with Great Britain, the above estimates would be trebled. The time required for the overland journey would be from four to six months. In point of fact, however, supplies for such an army could not be transported across the continent. On the arid and barren belts to be crossed, the limited quantities of water and grass would soon be exhausted by the numerous draught animals required for heavy trains, and over such distances forage could not be carried for their subsistence.

On the other hand, the enemy would send out his supplies at from one-seventh to one-twentieth the above rates, and in less time—perhaps one-fourth the time—if he should obtain command of the Isthmus routes.

Any reliance, therefore, upon furnishing that

part of our frontier with means of defense from the Atlantic and interior States, after the commencement of hostilities, would be vain, and the next resource would be to accumulate there such amount of stores and supplies as would suffice during the continuance of the contest, or until we could obtain command of the sea. Assigning but a moderate limit to this period, the expense would yet be enormous. The fortifications, depots and storehouses would necessarily be on the largest scale, and the cost of placing supplies there for 5 years would amount to nearly 5 millions of dollars.

In many respects, the cost during peace would be equivalent to that during war. The perishable character of many articles would render it, perhaps, impracticable to put provisions in depots for such a length of time; and in any case there would be deterioration amounting to some millions of dollars per year.

These considerations, and others of a strictly military character, cause the Department to examine with interest all projects promising the accomplishment of a railroad communication between the navigable waters of the Mississippi and those of the Pacific Ocean. As military operations depend in a greater degree upon rapidity and certainty of movement than upon any other circumstances, the introduction of railway transportation has greatly improved the means of defending our Atlantic and inland frontier; and to give us a sense of security from attack upon the most exposed portion of our territory, it is requisite that the facility of railroad transportation should be extended to the Pacific coast. Were such a road completed, our Pacific coast, instead of being further removed in time, and less accessible to us than to any enemy, would be brought within a few days of easy communication, and the cost of supplying an army there, instead of being many times greater to us than to him, would be about equal. We would be relieved of the necessity of accumulating large supplies on that coast, to waste, perhaps, through long years of peace; and we could feel entire confidence that, let war come when and with whom it may, before a hostile expedition could reach that exposed frontier, an ample force could be placed there to repel any attempt at invasion.

From the results of the surveys authorized by Congress, we derive at least the assurance that the work is practicable; and may dismiss the apprehensions which, previously, we could not but entertain as to the possibility of defending our Pacific territory through a long war with a powerful maritime enemy.

The judgment which may be formed as to the prospect of its completion must control our future plans for the military defense of that frontier, and any plan for the purpose which should leave that consideration out of view, would be as imperfect as if it should disregard all those other resources with which commerce and art aid the operations of armies.

Whether we shall depend on private capital and enterprise alone for the early establishment of railroad communication, or shall promote its construction by such aid as the General Government can constitutionally give; whether we shall rely on the continuance of peace until the increase of the population and resources of the Pacific States shall render them independent of aid from those of the Atlantic slope and Mississippi valley, or whether we shall adopt the extensive system of defense above referred to, are questions of public policy which belong to Congress to decide.

Beyond the direct employment of such a road for military purposes, it has other relations to all the great interests of our confederacy, political, commercial and social, the prosperity of which essentially contributes to the common defense. Of these it is not my purpose to treat, further than to point to the additional resources which it would develop, and the increase of population which must attend upon giving such facility of communication to a country so tempting to enterprise, much of which having most valuable products, is beyond the reach of market.

Some of the considerations which bear upon the questions submitted to the committee have been briefly suggested, but we do not deem it necessary to enter upon an extended argument to show either the constitutional power of Congress to aid the construction of the proposed roads, or its duty to exercise power.

The public mind has already formed its judgment on both these points. The public press, popular assemblies and legislative resolutions have spoken with a concurring voice; and recent representative conventions of the democratic party at Cincinnati, and the republican party at Philadelphia, have, with most remarkable unanimity and emphasis, declared the will of the people on this subject, in resolutions intended for our instruction.

The committee have deemed it their duty to give effect to this general wish, and have examined with much care the various plans which have from time to time been proposed. They have thought proper to change the provisions of the bill referred to them very materially preferring to make the grant directly to those companies whose interests and well established ability give assurance that they will press the work forward to completion at the earliest day possible.

#### Public Works of Tennessee.

Below we give the Report of the Railroad Commissioner for the State of Tennessee, in which the railroads, and the railroad system of that State, are fully described.

We have previously published a portion of the report but its importance now leads us to give it entire.

NASHVILLE, TENN., Jan'y 28, 1856.

TO ANDREW JOHNSON, Governor of Tennessee.

Sir:—In compliance with your request, I herewith submit my report of the condition, progress, and probable future prospects of the railroads in this State, entitled to State aid, under the provisions of the General Internal Improvement Law, passed 11th February, 1852, and the amendments thereto, showing the number of roads that have applied for State bonds—the amount of bonds issued—the amount of bonds yet to be issued—together with the capital stock subscribed to each of said roads, and the estimated cost of road way in the State, as well as the amount of finished road upon these lines, and also the amount within the limits of the State.

I have also made an estimate of all the roads in the State (except the Memphis, Clarksville and Louisville, and Junction roads, whose ultimate purposes I could not learn,) that have taken steps to secure the benefits of the Internal Improvement Law, so as to show an approximate of the ultimate liability of the State, should they all be completed.

Of the basis of this liability, or the State's lien for the loan of her credit, I need not speak, as the law itself shows the conditions upon which the bonds are to be issued.

It has been my object at all times, to see that the law was faithfully and substantially complied with, before recommending the issuance of bonds, and I am free to say, I have found all the companies applying for bonds striving to, and in most instances had, substantially complied with the letter and spirit of the law, before I was called on to examine their respective roads.

I have in every instance found the officers of the various companies disposed to open their books to my inspection, and to give me all the aid in their power, to facilitate my examinations as to their financial conditions. The character of the work on the various roads I have examined, I think, is such as was contemplated by the law; and the roads and their equipments will compare favorably with any others in the Union.

The following table will exhibit such facts as I have been able to get, in relation to the subject matter of the Report.



## WEST TENNESSEE.

Railroads in Tennessee entitled to State aid, which are building, or will probably be built.	Whole Length of Road, including Branches.	Length of Road in Tennessee.	Estimated Cost of Roadway in Tennessee.	Available Assets applicable to Roadway in Tenn.	Whole Length of Finished Road.	Length of Finished Road in Tenn., incl. Branches.	Maximum Grade of Road, in feet, per mile.	Whole Am't of State Aid granted by Tennessee.	Amount of State Aid actually received.
† Memphis and Charleston— Memphis to Stevenson ..	287	87	\$906,000	\$1,117,900	216	88	47	\$870,000	\$700,000
Bridge aid granted ..	..	..	.....	.....	..	..	..	100,000	60,000
† Mississippi and Tennessee— Memphis to Grenada ..	96	9.8	75,000	768,000	15	9.8	..	98,000	98,000
† Memphis & Ohio—Memphis to Paris ..	180	180	910,000	921,000	40	40	40	1,800,000	400,000
Bridge aid granted ..	..	..	.....	.....	..	..	..	100,000	60,000
† Mobile and Ohio—Mobile to Cairo ..	527	118.5	768,882	841,200	160	..	..	1,185,000	.....
† Mississippi Central and Tennessee— Canton, Miss., to Jackson, Tenn. ....	48	.....	.....	.....	..	..	..	480,000	.....
Bridge aid granted ..	..	..	.....	.....	..	..	..	100,000	.....
† North-west. road, West Tenn. —Nashville to Hickman ..	171	77	To Union City	..	..	68	..	770,000	.....
Bridge aid granted ..	..	..	.....	.....	..	..	..	100,000	.....
	470.8				481	187.8		\$5,108,000	\$1,818,000

## MIDDLE TENNESSEE.

* Nashville and Chattanooga— Nashville to Chattanooga. (In operation) ..	151	151	.....	.....	151	151	106	\$1,500,000	\$1,500,000
† Tennessee and Alabama— Nashville to Hamburg ..	135	135	\$983,000	\$956,000	27	27	49	1,850,000	300,000
† McMinnville and Manchester —Manchester to Tullahoma. (All graded) ..	34.5	34.5	138,313	161,000	..	..	..	345,000	300,000
† Central Southern—Columbia to Decatur ..	48.5	.....	.....	.....	..	..	..	485,000	.....
† Louisville and Nashville— Nashville to Louisville ..	184	45.5	.....	.....	..	..	..	455,000	.....
Bridge aid granted ..	..	..	.....	.....	..	..	..	100,000	.....
† Edgefield and Kentucky— Nashville to Henderson ..	144	48	.....	.....	..	..	..	480,000	.....
† South-western—McMinnville to Danville ..	85	.....	.....	.....	..	..	..	850,000	.....
† Winchester and Alabama— Dechard's to Gunter'sville ..	67	23	.....	.....	..	..	..	230,000	.....
† Nashville and North-western —In Middle Tennessee ..	171	81	.....	.....	..	..	..	810,000	.....
	651.5				178	178		\$6,605,000	\$2,100,000

## EAST TENNESSEE.

* East Tenn. & Ga.—Knoxville to Dalton (incl. a frac- tion in Georgia) ..	110	110	.....	.....	110	110	37	\$770,000	\$770,000
Bridge aid granted ..	..	..	.....	.....	..	..	..	100,000	100,000
† East Tennessee and Virginia —Knoxville to Bristol ..	180	180	\$835,853	\$856,215	26	26	68	1,300,000	469,000
Bridge aid granted ..	..	..	.....	.....	..	..	..	300,000	300,000
† Knoxville to Charleston— Knoxville to State Line ..	55	55	.....	.....	..	..	..	550,000	.....
Bridge aid granted ..	..	..	.....	.....	..	..	..	300,000	.....
† Knoxville and Kentucky— Knoxville to Danville ..	60	.....	.....	.....	..	..	..	600,000	.....
Bridge aid granted ..	..	..	.....	.....	..	..	..	100,000	.....
† Western and Charleston— Athens to Blue Ridge road ..	30	.....	.....	.....	..	..	..	300,000	.....
† Cleveland and Chattanooga— Cleveland to Chattanooga ..	30	.....	.....	.....	..	..	..	300,000	.....
† Cincinnati, Cumberland Gap & Charleston—Paint Rock and Cumberland Gap ..	94	.....	.....	.....	..	..	..	940,000	.....
Bridge aid granted ..	..	..	.....	.....	..	..	..	200,000	.....
	509				136	136		\$5,760,000	\$1,639,000

## RECAPITULATION.

	Miles of Road in Tenn.	Miles Finished.	State Aid Granted.	State Aid Rec'd.
West Tennessee ..	470.8	187.8	\$5,108,000	\$1,818,000
Middle Tennessee ..	651.5	178	6,605,000	2,100,000
East Tennessee ..	509	136	5,760,000	1,639,000
	1,630.8	451.8	\$17,468,000	\$5,067,000

NOTE A.—Roads marked thus (\*) are finished. Roads marked thus (+) are in an active state of construction, and progressing rapidly to completion. Roads marked thus (†) have portions of their lines under contract, and some work going on. Roads marked thus (§) have organized with a determination to go on to completion, but have not let their work to contract.

NOTE B.—In the estimate of finished roads, the Nashville and Chattanooga lateral to Shelbyville, of eight miles, was inadvertently omitted. This error corrected, will make the finished roads in Tennessee, 459.8 miles—the whole length of the Nashville and Chattanooga road and branch, being 159 miles. The State aid per mile granted to, and received by this road, is \$9,433.

In addition to the roads marked as finished and in operation, many of the companies, particularly those marked with a (+), have large portions of their lines graded, and will lay the track upon them during the present year. But I have no means of ascertaining the exact amount of graded road on each, as I have made a personal examination only of those lines making application for State Bonds.

Part of the Nashville and Chattanooga road, in Alabama, is placed as being in Tennessee.

I have placed in the above estimate such roads as have taken some steps to avail themselves of State aid, (with the two exceptions referred to,) so far as I have been able to ascertain, and left out those that have taken none, as the time has now nearly elapsed, under the general law, for them to have completed the first thirty miles of their respective roads. I have doubtless placed several roads in the list, expected to receive State aid, that may not comply with the law, or that will be materially shortened by making other connections than those originally contemplated, consequently reducing the State aid that much; while it may be possible that I have omitted some roads that may yet organize, and go to work and secure the State aid. But the estimate made is large, and it is thought will fully cover any possible contingency, as I feel assured that more of the roads that are placed in the estimate will never comply with the law, than there will be of those that are left out of the estimate that will yet come in, and comply with it. The whole estimate is, however, approximate, and is based upon the best information I have been able to obtain; but is believed to be very near what the actual results will prove.

It will be seen that the aggregate length of roads, as given, is sixteen hundred and thirty and eight-tenths miles, which, it may be safely assumed, will require for their completion an expenditure of over \$35,000,000; the State will have incurred a liability in this outlay of \$17,468,000, taking as her security, a lien upon the whole investment.

I beg leave to remark, that our railroads, so far as they now operate, must do mostly a local business, until they shall have established their various connections. One road is dependant upon another, and neither can exhibit its capacity in developing resources, giving energy and increase to trade, or rendering compensating dividends to its owners, until it shall fall into and become a part of the systems of other States.

The Tennessee system is yet in its infancy, and its importance can only be appreciated by contemplating our lines of road in their ultimate and varied connections with other roads of the State. In this point of view, I beg leave to submit a few remarks, which I trust will not be considered out of place.

Commencing then, with the Mobile and Ohio road, (nearly graded through our State,) this is the second longest road in the Union, being only excelled by the Illinois Central, with which it is intended to connect at Cairo. The two united, from the Northern and Southern line, passing through West Tennessee, and will bring into close contact the Northern and Southern extremes of the Mississippi valley. This road in its progress from Mobile, intersects in Mississippi the line of

roads from New Orleans; crosses the Memphis and Charleston road about ninety miles from Memphis; at Jackson, Tennessee, it intersects the Mississippi Central and Tennessee road, which is but an extension of the New Orleans road; crosses the line of the Memphis and Ohio road at or near Trenton, in Gibson county, and from its northern terminus to that point, will aid in establishing another important line of southern travel, by way of Memphis and Grenada to New Orleans. North of the Memphis and Ohio intersection, at Union City, in Obion county, the main line of this road crosses the Nashville and North-Western road, (now in rapid progress); from this point it also throws off its Paducah lateral—the main stem passing on to its northern terminus at the mouth of the Ohio river. Falling back to McNairy county Tennessee, this road, so remarkable for its geographical relations and adaptations to the other roads in our system, sends off another lateral of sixteen and a half miles, (now under contract,) and is designed to connect with the Tennessee and Alabama railroad, at Hamburg. Thus by a slight divergence, it falls into the main Northern and Southern trunk lines, passing through Middle Tennessee, and aiding to establish another through line from New Orleans and Mobile to Louisville, Kentucky, and to Henderson on the Ohio river, at which points these Northern roads are intended to complete the connections, and will fall into the net-work system of roads in the North-western States, placing Nashville in direct connection with the great railroad centres of that important region.

The Edgefield and Kentucky road, passing through the coal regions of Kentucky, will establish a direct connection between Nashville and Chicago, while from its northern terminus, towards the south, it falls into line with the roads now projected or in progress, leading from Nashville, via Decatur, Alabama, to the southern portions of Alabama.

The Louisville and Nashville road, now placed under the most favorable auspices, will give an important outlet from the South to the North-eastern cities, via Louisville, Cincinnati, and other great central points.

The Alabama Legislature lately granted "material aid, to a central line of roads, leading from the Tennessee valley to the waters of Mobile Bay; which insures their speedy construction. This fact gives additional importance to the proposed Central Southern road, which would aid in establishing a direct line from Nashville along these routes, through the centre of Alabama.

The movement just adverted to on the part of Alabama, will present also a strong argument in favor of the construction of the Winchester and Alabama, and the South-western railroads, which, if carried to the respective connections contemplated by the friends of these enterprises, will give a line of road leading from Cincinnati to South Alabama.

Passing, however, to the Eastern portion of our system of improvements, I remark that the Knoxville and Kentucky, and the Knoxville and Charleston roads, when completed, will establish an important communication between Cincinnati and Charleston, and thus open up a highway between the Ohio valley and the South-Atlantic seaboard. Cincinnati and Charleston, (the Queen Cities of their respective States,) upon the completion of these projects, will have been for the first time locked in a lasting embrace—"a consummation most devoutly to be wished." The line of roads from Knoxville, designed to connect that place with Charleston, is made up of four companies, to wit: The Knoxville and Charleston railroad company in Tennessee; the Tennessee River railroad company, in North Carolina; the Blue Ridge railroad company in Georgia; and Blue Ridge railroad company in South Carolina. These four companies together have a capital of nearly \$5,000,000. The enterprise contemplates the construction of two hundred miles of road, from Knoxville to Anderson Court-house, in South Carolina, which, if constructed, will place Knoxville one

hundred and twenty miles nearer to Charleston than by the present railway route. About fifty miles of the road in South Carolina was graded in September last, and about seven hundred hands were then engaged upon that part of the line.

A reference to the map will show the importance of the connection intended to be established by the proposed Western and Charleston railroad.

The Cincinnati, Cumberland Gap, and Charleston road is the Tennessee link in a line of roads from Cincinnati to Charleston, which is designed to enter the State on the North at Cumberland Gap, and passing out of it into North Carolina, by way of French Broad River, at Paint Rock. To complete this line of road, there is yet to be finished (besides the Tennessee part) one hundred and twenty-eight miles from Lexington, Kentucky, to Cumberland Gap, and, on the South, about one hundred miles from Paint Rock to Spartanburg, South Carolina. The Legislature of North Carolina has appropriated, as I believe, five millions of dollars to extend her Central road from Salisbury (the point at which it is completed) to Paint Rock. The North Carolina Central is intended to form a part of the trunk of said line of roads. The terminus of the North Carolina Central are Paint Rock, on the French Broad, and Beaufort, on the Atlantic, with a lateral to Spartanburg. This line of roads, if completed, will form nearly an air line through upper East Tennessee, from Cincinnati to Charleston. The only material divergence (of about thirty miles) is in approaching the Cumberland Mountain.

Returning to Memphis as a starting point, there is now rapidly forming another line of roads, destined to take an important position in our system of improvements. It may be properly called the North-Eastern and South-Western line. From Memphis, as a point of divergence, this line will be made up on the South-West of the roads projected and in progress, by the way of Little Rock and Fulton, in Arkansas, Shreveport, in Louisiana, and thence into the interior of Texas, there pointing to more western connections to be formed in that interesting State.

From Memphis, this line takes up its northerly course along the Memphis and Charleston, eastern end of the Nashville and Chattanooga, Chattanooga and Cleveland, East Tennessee and Georgia, East Tennessee and Virginia, Virginia and Tennessee, and Orange and Alexandria roads, to Alexandria in the District of Columbia; from which point it again takes up its air line course, by means of its more northern connections, to Boston, by way of Baltimore, Philadelphia and New York.

The completion of the New Orleans and Mobile lines of roads, will perfect the South-western connections in the direction of the two cities to which they respectfully lead. From Memphis to Alexandria, D. C., little is needed to perfect the line.—The Memphis and Charleston road will be finished early in 1857. The Orange and Alexandria is pressing its extension from Gordonsville to Lynchburg, a distance of about seventy-five miles. The Virginia and Tennessee road is now nearly finished. The shortened distance from Chattanooga, it is hoped, will be soon placed under contract, and the East Tennessee and Virginia company, struggling under a thousand difficulties, unfelt by their more favored neighbors, are steadily and certainly pushing their works to completion.—When these gaps shall have been filled up, East Tennessee will be relieved from her position of isolation, and, for the first time, will have a chance to develop her immense agricultural and mineral resources. This line of road is over three hundred miles nearer to Washington, from Memphis, and over one hundred and ten miles nearer from Atlanta, the railroad centre of Georgia, than by the way of Augusta and Wilmington. It escapes the frigid cold, and other vexatious incidents, of more Northern lines, on the one hand, and the sultry heats, uninteresting scenery, and sterile regions of the Southern line upon the other. In its course, it pierces the three great mountain ranges of the South—presenting, every hour, magnificent

scenery, fertile valleys, and cultivated regions to the eye of the traveler. Nature itself has decreed this line of roads to be one of the great arteries of trade, commerce and travel.

The Nashville and Chattanooga road, while at its eastern end it aids in forming the line just referred to, falls directly into connection with the Nashville and North-western road, now in progress, which will, upon its completion, cross our Northern and Southern routes, and give us a South-eastern and North-western trunk, directly connecting, by the way of Nashville, the system of roads actively progressing in Missouri with those of Georgia and South Carolina, and leading to their important seaports.

The Nashville and North-western, and Mississippi Central, contemplate a connection at Huntingdon, which, when consummated, will open up another outlet to New Orleans. The Mississippi Central road, from the State line to Jackson, Tennessee, it is understood, will have its roadway completed by April. The gap between Jackson and Huntingdon is under forty miles.

Permit me to remark, that the system of Improvements, as designed by our Legislature, was marked with imperfections. Enterprises of inferior merit were, in some instances, dignified with the tender of State aid. This feature, almost inseparable from such a scheme, has, to a great extent, been corrected by the abandonment of such enterprises; and thus, the errors of legislation have been obviated by the foresight of our citizens. The general policy now being carried out is believed to be wise and prudent, and every wish of the heart is in favor of its consummation.

Should no new enterprises of doubtful utility be nursed into existence to mar the beauty of our system, and it continue to progress as it now does, Tennessee, by the liberality of her Legislature and the enterprise of her people, will soon have the satisfaction of seeing that she has contributed her full share towards weaving the great national web now spreading over the whole country; which, while it stimulates our commerce and develops our untold resources, will perform the more sacred office of holding the great sisterhood of States in a lasting and durable embrace.

A few suggestions, as to our Internal Improvement Laws, and I shall close.

No certain provisions for the adequate preparation of a sinking fund, for the redemption of the State Bonds, has yet been made. Instead of requiring companies to set apart a portion of their earnings for this purpose, five years from the completion of their road, as is now the case, it ought to commence within a certain specified period from the issuance of the Bonds.

Our Bonds are now placed in the hands of the officers of the different companies, to be negotiated by them. In many instances, they have no experience in the money markets of the United States and Europe. The effect cannot be otherwise than injurious to the interests of the State, as well as the companies. Several States have been forced to abandon this policy, and to appoint special agents, at the great centres of capital, to negotiate their Bonds. The plan has worked well; and I submit, that something of the sort should be done in Tennessee.

At present, we have no law regulating the grade of roads. It is comparatively easy to build a railroad that shall conform to the inequalities of the surface over which it passes; but, when constructed, its capacity for usefulness is, in a great measure, destroyed, and its ability to meet the demands upon it may be well questioned. A prudent and reasonable restriction in this matter, is believed to be important.

At present, there is no direct relation established between the Road Commissioner and the Legislative Department. I would suggest, that the immense interest which the State has embarked in her railroad enterprises would seem to require that this officer, in addition to his other duties, should, at each meeting of the Legislature, submit a full report of the condition, prospects and



working of the different railroads now receiving the aid of the State.

Respectfully submitted,

R. G. PAYNE, Road-Commissioner.

#### TABLE

Showing the distances from most of the principal commercial cities of the Union, and their connection with the Tennessee system of Internal Improvements.

Nashville to New York, via Louisville, Pittsburg and Philad. . .	1,091 miles.
" to New York, via Cincinnati, New York and Erie R.R. . .	1,146 "
" to New York, via Knoxville and Washington City . . .	983 "
" to New York, via Augusta, Branchville & Wash'ton City . . .	1,340 "
" to Charleston, S. C., via Augusta, Ga. . .	597 "
" to Charl'ton, via Rabun Gap R. R. . .	602 "
" to Richmond, Va., via Augusta, Ga. . .	991 "
" to Richmond, via Knoxville. . .	740 "
" to Savannah, via Atlanta & Macon . . .	581 "
" to Chicago, via Henderson. . .	503 "
" to New Orleans, via Jackson, Tenn. . .	585 "
" to New Orleans, via Columbia and Hamburg, Tenn. . .	514 "
" to Memphis, via Brownsville, Tenn. . .	225 "
Memphis to New Orleans, via Grenada . . .	360 "
" to New York, via Knoxville and Washington City . . .	1,150 "
" to New York, via Chattanooga and Augusta . . .	1,504 "
" to Charleston, via Chattanooga and Augusta . . .	758 "
" to Charleston, via Athens, Tenn., and Rabun Gap R. R. . .	763 "
" to Richmond, Va., via Knoxville, Tenn. . .	904 "
" to Richmond, via Augusta, Ga. . .	1,155 "
Mobile to Chicago, via Jackson, Tenn. . .	858 "
New Orleans to Chicago, via Jackson, Tenn. . .	885 "
" to Chicago, via Memphis. . .	887 "
" to Louisville, via Nashville. . .	700 "
" to New York, via Knoxville. . .	1,318 "
" to New York, via Atlanta & Augusta . . .	1,632 "
Cincinnati to Charleston, via Knoxville and Aikin . . .	663 "
" to Savannah, via Knoxville. . .	652 "
" to Charleston, via Cumberland Gap and Paint Rock R. R. . .	650 "

NOTE.—The roads projected, or in progress, in Alabama, will place Knoxville in a direct line of travel between Mobile and Cincinnati.

#### Pittsburg and Steubenville Railroad.

In regard to the Pittsburg and Steubenville road the *Chronicle* says:

"The Steubenville road is at last emerging from the clouds and thick darkness that have so long obscured its prospects. The gentlemen who now hold the road under contract have arrived upon the ground, and we understand that the work will be commenced in a few days with a strong force of men. It is expected that the road, except the bridging, will be completed before the termination of the present year. The Board of Directors held a meeting on Wednesday, when Isaac Jones, Esq., according to previous arrangement, resigned the Presidency of the company, to take effect on the first of October. R. W. Latham, Esq., of New York, was unanimously chosen to fill the vacancy. Mr. Latham is a gentleman of tried financial ability, and has been largely instrumental in consummating the contract by which the road is to be

completed. We have the satisfaction of knowing that this important road is in a fair way to attain a condition of final prosperity."

#### Chicago and Burlington Railroad.

Earnings for 1856:

	May.	June.	July.
Freight....	\$86,580.83	\$109,966.59	\$129,458.84
Passengers.	54,684.14	53,096.29	45,210.71
Miscel's ...	1,783.10	1,515.36	1,613.94
Total.....	\$143,048.07	\$164,578.24	\$176,282.99

	May.	June.	July.
Freight....	\$81,197.84	\$109,125.44	\$90,006.22
Passengers.	44,164.06	43,863.13	36,198.18
Miscel's ...	1,389.29	1,389.29	1,389.29
Total.....	\$126,751.19	\$157,377.86	\$127,593.69

#### Railroad Car Springs.

If there is any one thing that annoys a traveler on a railroad, more than another, it is a bad spring. To be pitched and tossed about without mercy, without feeling, is a condition that is certainly anything but enviable. We can stand a rough road, but a combination of rough roads and bad springs is most unbearable. Feeling that this is too often the case, we have taken some pains to ascertain if there was not something, new or old, in this line, that could supplant those now in use. In our investigation we have found many kinds, and we trust we shall not be considered as intrusive if we should detail some of our observations.

Metal, it has been pretty generally ascertained, makes the best spring, and attention is generally directed towards springs of this class.

Of the kinds that we have seen, there are but two that deserve much attention; and of these two, but one, we think, will ever be found to answer the desired purpose. To be sure there are many that are apparently well adapted to the purpose—but when the test comes, the failure comes also. Much has been said with regard to a spring made in England, known as Bailie's Spring; but, although a very good one, it will answer for one purpose only—that is, carrying locomotives; the weight never varying more than two or three hundred pounds, of course any spring that can stand the pressure of the locomotive, without setting, will answer; but for passenger or freight cars, where the weight is varied continually, they have not been found to answer the purpose. They are too rigid when of sufficient power; besides, there is too much friction. It has been argued that friction improves a spring. This we have never been able to believe. The Gardiner's Conical Volute Spring is the only one which, to our fancy, overcomes the difficulties and objections that have been urged to those now in use and the Bailie Spring. Its construction is certainly the most simple, its appearance the most unique of any made; it is light, cheap, to all appearances the most durable, and withal most powerful of any we have seen. The motion, when under the car, is soft and delicate; there is no rude jar, no unequal, sudden motion; but it rides, as a spring should ride; and this spring has no friction. Mr. Gardiner in this has certainly, by the most simple means, accomplished a great object—outdistanced all competitors. Many have striven to attain this point, but failed; and when the failure came, said that friction was necessary. Believe us, it is injurious.

We have seen the most severe tests inflicted upon the Gardiner Spring, but in all cases it was triumphant. We understand that for the past eight months they have been in use on one of our City Railroad Cars, and at this present day are as good as at first. They were put under an iron car, where, in the same length of time, three sets of India rubber had been rendered useless. We look forward to this invention as one that will eventually supplant all other springs in use. A company has been formed, we believe, of wealthy gentlemen, who intend to manufacture them on an extensive scale. Mr. Charles Minot, late Super-

intendent of the New York and Erie Railroad is their President. The fact that this gentleman has consented to the use of his name in connection with an article of this kind, is a sufficient guarantee of the estimation in which it is held by railroad men. We have confidence in Mr. Minot's opinion.—*Am. Railway Guide.*

#### More Iron.

Over six hundred tons of iron, for the Tennessee and Mississippi railroad, was landed at our wharf yesterday. The freight bill amounted to the snug little sum of \$3,024.

#### Texas Statistics.

The report of the State Treasurer of Texas shows the number of acres of land, upon which taxes were assessed, to be 45,893,869, and the assessed value, \$58,671,126. The number of town lots assessed was 40,136, at a value of \$10,103,638. The number of negroes is stated at 105,803, value, \$53,873,924; number of horses, 171,814, at \$7,943,878; head of cattle, 1,433,792, at \$3,922,545. The total value of assessed property in the State was \$149,521,451. The whole tax raised upon this property was but \$225,270.40, which, added to the poll tax, makes the whole amount raised by taxation \$246,252.90.

#### Milwaukee and Watertown Railroad.

We learn that the work on the extension of this road is progressing rapidly, and that the grading is nearly completed to Lowell, ten miles from Watertown, the present terminus of the road. The work of driving the piles across "Mud Lake," is being pushed at the rate of 100 to 150 feet per day, and that the contractors have arranged for another "driving machine," which will be put on the work immediately, and which will secure the completion of the work within thirty days. The iron is ready, and the track-laying is to be commenced on the first day of August. The officers of the road are pushing the work with great vigor and confidently expect to reach Lowell station by the first day of September next. From Lowell to Columbus, nine miles, there is a strong force on the line, to which the contractors are making large additions, the grading is so far advanced that, with the large force which will be concentrated on that portion of the work as soon as the east end is completed, will without doubt be sufficient to complete that portion of the grading as fast as the iron can be put down.

There is no bridging or piling west of Lowell, and the heaviest portion of the work is nearly done. On the 1st of November next the Directors confidentially expect to open the road to Columbus, a distance of 64 miles from Milwaukee, and on an air-line toward Portage City, and less than 27 miles from that point.

When this route is completed to Columbus, there can be no doubt it will be one of the best paying routes in the west. The county of Columbia is one of the richest farming counties in the State, perhaps in some respects the best, its rolling prairies on the south and west, with abundance of running waters, with the splendid opening on the north and east, with plenty of timber, and water power in abundance, render this portion of the State capable of furnishing an immense amount of business for this road.

Although the enterprise has encountered much opposition and many difficulties which have prevented its completion as early as its friends desired, it has been managed with integrity and in a manner which has in an eminent degree secured the confidence of the stockholders and capitalists who have most heartily embarked in the project, and although it would have been desirable to have completed the work at an earlier day, they have the fullest confidence in the directors, and have the satisfaction of knowing that its direction is composed of gentlemen of large means, of great energy, and who are bound to carry forward this useful work with prudence and economy, and who are determined to bring it to a successful consummation at an early day.—*Daily Wisconsin.*



## Railway Share List.

Compiled from the latest returns—corrected every Wednesday—on a par value of \$100.

NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.	NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.	
Atlantic & St. Lawrence	149	1,588,100	2,973,700	6,019,929	470,647	110,247	6	65	Brunswick and Florida, Ga.	80	800,000	800,000	550,000	In progr.				
Androscog. & Kennebec	55	588,042	1,022,905	2,210,947	209,475	110,247	6	65	South Western	92	1,097,496	485,500	1,824,920	253,306	141,168	8		
Kennebec & Portland	66	1,114,725	1,061,286	2,470,600					Tennessee and Alabama	30	246,486		679,906	In progr.				
Portl., Saco, & Portland	51	1,367,000	119,287	1,486,327	270,214	112,491	6	85	Tennessee and Misiss.	151	170,931		175,740	In progr.				
Boston, Concord, & Montreal	93	1,808,093	1,089,512	2,771,310	233,284	120,834			Memphis and Charleston	217	2,179,440	2,127,002	4,028,796	311,631	159,572			
Chesapeake	58	1,008,925	899,813	3,170,687	300,221	148,566	2	17	Mobile and Ohio	153	2,568,555	1,802,921	4,536,412	199,932	109,236			
Concord	36	1,600,000	8,242	1,412,576	335,499	138,454	6	77	Miss. Central	188	642,534		628,308	In progr.				
Northern, N. H.	62	2,768,400	none	3,016,683	370,529	138,299	2 1/2	41 1/2	N.O. Opelousas & G.W.	56	2,930,425	671,645	2,657,555	In progr.				
Con't & Passumps. Riv.	61	1,048,145	787,608	1,780,062	192,676	55,173	none	4	Vicksburg, Shreveport & Tex.	111	1,117,760	none	1,077,895	In progr.				
Rutland & Burlington	120	2,253,376	2,662,896	5,278,426	394,971				East Tennessee and Ga.	111	1,000,000	1,500,000	2,500,000	In progr.				
Vermont Central	117	6,000,000	3,650,286	8,483,366	820,119	214,793	none	1 1/2	East Tennessee and Va.	16	625,425	788,593	1,033,781	In progr.				
Boston and Lowell	27	1,880,000	325,685	2,188,595	484,754	140,377	6	62	Nash. and Chattanooga	151	2,319,330	1,407,081	3,843,694	316,090	112,177	none		
Boston and Maine	83	4,076,974	160,000	4,179,535	854,426	339,060	6	77 1/2	Covington & Lexington	98	1,302,304	2,235,939	3,738,753	264,978	138,694			18
Boston and N.Y. Central	74	2,240,300	1,618,671	3,877,154	558,671	199,639	none	60	Lexington and Frankfort	29	430,055	188,099	637,071	93,293	43,635	6		
Boston and Providence	85	3,160,000	359,132	4,865,491	1,008,004	404,461	6 1/2	83	Lexington and Danville	66	694,444	52,734	747,178	In progr.				
Boston and Worcester	68	4,600,000	655,428	997,352	119,221	55,527	3	49 1/2	Louisville and Frankfort	65	698,236	669,061	1,589,566	244,014	96,902	6		
Cape Cod	47	681,690	280,595	1,024,244	286,569	108,787	5 1/2	47	Atlantic & Gt. Western	254	866,939	77,294	613,231	In progr.				
Connecticut River	52	1,691,110	273,241	4,621,016	647,281	305,998	none	40	Bellefontaine and Ind.	118	1,881,635	2,025,295	2,852,652	298,293	140,823	none	30	
Eastern, Mass.	60	2,583,400	2,947,737	4,621,016	647,281	305,998	none	40	Clev., Col. and Cin.	141	4,547,020	122,857	4,613,722	290,295	732,056	9	102	
Fitchburg	67	3,540,000	153,700	3,765,998	681,163	225,071	6 1/2	65 1/2	Cleveland and Toledo	200	2,676,425	2,689,301	6,124,629	736,272	396,996	10	72 1/2	
North-Eastern	30	800,242	225,535	968,521	In progr.				Clev. and Mahoning	103			628,583	In progr.				
N. Bedford and Taunton	21	600,000	none	633,958	198,491	55,583	6 1/2		Clev. and Pittsburgh	133	2,780,744	3,043,992	6,537,466	581,877	308,515		57	
Old Colony and Fall River	37	3,015,100	292,650	3,362,949	663,499	295,738	6	82 1/2	Cin. Hamilton & Dayton	60	2,153,900	1,321,218	2,987,757	508,271	278,012		65	
Vermont and Mass.	77	2,232,541	1,033,670	10,495,908	1,869,673	633,013	7	85	Cin. Wilm. & Zanesville	131	1,120,450	1,311,285	2,326,459	In progr.				12
Western, Mass.	166	5,150,000	6,904,420	10,495,908	1,869,673	633,013	7	85	Columbus and Xenia	55	1,484,560	149,000	1,481,733	368,366	187,518	10	82	
Worcester and Nashua	46	1,141,000	206,565	1,451,271	294,780	75,760	2	40	Dayton, Xen. & Belpre	63	437,838	422,658	860,496	In progr.				
Providence and Worcester	43	1,510,020	385,461	1,896,696	311,430	138,057	none	70	Dayton and Michigan	140	1,076,602	393,011	1,185,826	In progr.				
Hartford and N. Haven	72	2,350,000	666,000	3,313,932	730,012	352,799	10	123	Dayton and Western	35	310,000	600,000	733,769	In progr.				17
Hart'd, Prov. and Fishkill	122	2,008,110	2,060,460	4,060,569	258,585	119,611	none		Eaton and Hamilton	42	454,890	904,459	1,155,135	171,929	65,000		20	
Housatonic	110	2,000,000	414,240	1,580,723	220,459	93,768	none		Little Miami	65	2,963,921	1,171,735	3,648,172	681,562	336,708		87	
Wassaic	57	1,081,500	624,244	1,580,723	220,459	93,768	none		Mad River and L. Erie	205	2,451,650	2,572,932	4,446,661	In progr.				15
N. York and N. Haven	62	788,263	2,876,808	6,376,803	884,806	338,577	none	25	Central Ohio	138	1,620,927	848,076	4,283,448	Recently opened.				none
N. Haven and N. London	50	788,263	735,165	1,450,318	83,007	30,318	none		Ohio and Penn.	187	2,451,700	3,219,000	5,670,700	1,111,626	662,117	9		
N. London, W. & Palmer	66	500,000	1,073,678	1,694,383	124,044	66,480	none		Pittsburg, Mayv. & Cin.	50	371,350	31,000	390,933	In progr.				
Norwich and Worcester	66	2,122,800	763,489	2,597,153	304,236	88,458	2 1/2	25	Sandy, Mans. & Newk.	127	1,350,000	2,206,357	3,552,357	325,968	164,479	none		
Albany Northern	32	459,000	1,625,098	1,840,695	117,716	9,904	none		Schofield & Hocking Valley	135	408,975	695,050	888,868	In progr.				
Black River and Utica	35	643,530	317,559	974,323	In progr.				Spring, Mt. Vernon & P.	113	1,000,000	950,000		In progr.				
Buffalo, Cora. and N. Y.	100	1,487,871	1,501,183	2,819,096	172,476	66,388	none		Tol. Wabash & St. Louis	242	2,500,000	4,630,000		In progr.				
Buffalo and N. Y. City	92	768,439	2,557,849	3,401,868	288,392	31,896	none		Cin., Log. and Chicago	255	4,196,679	1,006,125	2,080,433	In progr.				
Buffalo and St. Line	69	1,300,000	1,040,000	2,494,364	879,750	345,763	10		Evansville & Crawfordsv.	109	709,945	1,177,596	1,844,541	127,400	64,552			
Canadaigua and Elmira	47	434,111	922,393	1,375,796	174,089	69,506	none		Ind. and Cincinnati	88	1,218,728	1,462,859	2,178,461	356,012	193,142	7	60	
Canadaigua & Niagara F.s	98	1,815,000	2,276,854	3,495,832	135,433	48,649	none		Indiana Central	66	611,400	1,261,179	1,907,911	350,176	134,375		60	
Cayuga & Susquehanna	55	687,000	508,889	1,187,562	135,433	48,649	none		Ind., Clev. & Pittsburg	83	826,825	1,006,400	1,831,225	228,058	93,010	none		
Hudson River	144	3,765,466	9,250,382	12,737,898	1,812,087	603,946	none	29	Jeffersonville	60	1,014,282	694,000	206,544	94,318	34,318	none		
Long Island	95	1,875,148	668,949	2,555,986	301,793	116,462	none	28 1/2	Madison and Indianapolis	87	1,647,700	1,336,816	1,205,000	288,146	112,880	none		
New York Central	494	10,022,958	25,126,689	38,439,431	5,488,993	2,627,118	none	58	New Albany and Salem	288	2,635,121	6,281,948	6,643,189	645,827	371,402	none		
New York and Erie	138	5,717,100	4,069,789	8,758,208	1,355,577	294,126	none	16	Peru and Indianapolis	73		558,314	150,000	90,000	none		16 1/2	
New York and Harlem	138	1,653,022	4,406,574	5,470,714	620,153	135,754	none	1 1/2	Terre Haute and Ind.	73	974,800	604,355	1,502,166	287,512	189,702	10		
Northern, N. Y.	118	3,999,000	216,681	727,683	126,540	59,982	3 1/2		Chicago and Rock Is'd	182	3,141,500	2,387,155	5,214,152	In progr.				91
Oswego and Syracuse	35	467,200	294,189	749,689	In progr.				Chicago and St. Louis	220			1,077,312	In progr.				
Potomac and Watertown	29	610,000	140,000	896,423	241,149	82,600	7		Chicago, Burl. and Quincy	58	1,439,100	1,634,736	2,884,622	732,580	379,821	20		
Rensselaer & Saratoga	25	600,000	395,600	719,909	21,089	none			Central Military Tract	88	1,202,500	2,135,050	2,920,241	471,399	219,588			
Saratoga and Whitehall	48	768,369	1,678,804	2,272,777	159,484	22,503	none		Chic. St. Paul & F'd du Lac	178	2,300,000	1,325,000	3,625,000	In progr.				
Syracuse & Binghamton	27	437,830	737,079	1,109,222	166,363	55,184	none		Galena and Chicago	259	5,441,400	3,318,039	7,742,614	2,812,786	1,192,042	22	108	
Troy and Boston	97	1,370,730	700,979	2,068,068	404,374	172,474	3 1/2		Illinois Central	627	2,271,050	19,416,392	20,374,446	1,532,118	627,952		109	
Watertown and Rome	64	1,000,000	1,619,000	2,619,000	161,355	75,534	none		Peoria and Okawaka	93	569,889	818,454	1,388,342	In progr.				
Delaware Delaware	94	3,000,000	11,407,200	6,636,523	2,017,127	961,941	12	125	Ohio & Miss. (Wst. Div.)	147	1,780,295	3,292,403	4,870,586	Recently opened.				
Garden and Albany	60	369,320	1,622,131	1,729,462	122,417	60,080	none		Terre Haute and Alton	173	2,281,420	2,256,000	5,537,424	In progr.				
Garden and Atlantic	39	5,482,550	690,000	4,310,011	861,514	500,747	10	118 1/2	Detroit and Milwaukee	185	838,000	1,128,964	1,966,969	In progr.				
New Jersey	63	1,000,000	2,298,178	3,683,149	393,728	171,603	none		Mich. Central	282	6,032,444	5,995,013	10,668,155	2,215,283	879,556	10	89	
New Jersey Central	63	2,157,895	375,000	1,636,550	229,341	96,267	6		Mich. South'n & N. Ind.	475	6,928,900	6,319,224	11,645,208	2,410,000	875,000	10	88 1/2	
Morris and Essex	63	1,637,567	242,564	1,988,377	Recently opened.				Green Bay, M.L. & Ch.	156	764,075	442,726	1,198,765	In progr.				
Allegheny Valley	63	1,700,000	1,940,000	3,640,000	219,253	62,450	none		Milwaukee and Miss.	106	1,826,422	2,467,889	3,578,757	691,543	417,443	17	76	
Cataw. W. & Erie	66	1,099,500	1,211,191	1,833,143	168,994	66,994	none		Milwaukee & Water'n	72	354,881	132,000	514,288	In progr.				
Cumberland Valley	109	3,051,622	3,884,702	6,022,667	538,911	259,263	6		Milwaukee and Horicon	15	554,200							



## Railroad Bonds.

NAMES OF COMPANIES. (The following quotations are at interest.)	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked.
Alabama and Tennessee River	\$888,000	1st mortgage, convertible	7	1st Jan. 1st July	N.Y.	1872	85	
Buffalo and State Line	500,000	Do. Do. convertible	7	April, October	"	1866	97 1/2	
Bellefontaine and Indiana	600,000	Do. Do. convertible	7	Jan'y, July	"	1866	85	
Do. do.	200,000	Real estate, convertible	7	Jan'y, July	"	1868		
Do. do.	200,000	Income, guar. Cl. Col. & Cin.	7	Feb'y, August	"	1869		
Central Ohio	1,250,000	1st mort. conv. east. sec.	7	March, Sept.	"	1861-64	82	88
Do. do.	800,000	2d do. convertible	7	March, Sept.	"	1865	70	72
Cincinnati, Hamilton, and Dayton	500,000	1st mortgage convertible	7	20 Jan. 20 July	"	1867		91
Do. do.	465,000	2d do. do.	7	May, Novemb.	"	1869		86
Cincinnati and Marietta	2,500,000	1st mortgage, conv. till 1862	7	Jan'y, July	"	1868	72 1/2	77 1/2
Cincinnati, Wilmington, and Zanesville	1,300,000	Do. convertible	7	May, Novemb.	"	1862	85	
Cleveland, Painesville, and Ashtabula	667,000	Do. Do. convertible	7	Feb'y, August	"	1861	91	95
Cleveland and Pittsburgh	800,000	Do. Do. convertible	7	Feb'y, August	"	1860	93	
Do. do.	1,200,000	Do. on Branches	7	March, Sept.	"	1873	75	78
Cleveland and Toledo	625,000	Do. Do. convertible	7	Feb'y, August	"	1863	87	
Chicago and Mississippi	800,000	Do. conv. till 1857	7	April, October	"	1862-72	80	
Do. do.	1,200,000	Do. Do. convertible	7	April, October	"	1862-72	80	
Covington and Lexington	400,000	Do. Do. do.	7	April, October	"	1867	75	
Do. do.	1,000,000	2d mortgage, convertible	7	March, Sept.	"	1868	65	
Dalaware, Lackawanna, and Western	1,500,000	1st mortgage, do.	7	April, October	"	1875		91
Fort Wayne and Chicago	1,250,000	Do. conv. till 1863	7	Jan'y, July	"	1873		80
Galena and Chicago	2,000,000	Do. Do. convertible	7	Feb'y, August	"	1863	94	95
Do. do.	2,000,000	2d mortgage, do.	7	May, Novemb.	"	1875	87	88 1/2
Great Western (Illinois)	1,000,000	1st mortgage, do.	10	April, October	"	1868	87	
Green Bay, Milwaukee, and Chicago	400,000	Do. convertible	8	10 April, 10 Oct.	"	1863	93	95
Jeffersonville	300,000	Do. 2d sec. inconv.	7	April, October	"	1873		75
Indiana Central	600,000	Do. Do. convertible	7	May, Novemb.	"	1866		90
Indianapolis and Bellefontaine	450,000	Do. Do. do.	7	Jan'y, July	"	1860-61	70	81
Indianapolis & Cin'ti (for Lawb. & U.M.)	500,000	Do. conv. till 1857	7	March, Sept.	"	1866	85	
La Crosse and Milwaukee	950,000	1st mort. 1st sec. conv. till 1864	8	May, Novemb.	"	1874	82 1/2	85
Lake Erie, Wabash, and St. Louis	3,400,000	1st mortgage, conv. till 1859	7	Feb'y, August	"	1865	70	75
Little Miami	1,000,000	Do. inconv.	6 1/2	2 May, 2 Nov.	"	1868	80	81
Michigan Central	1,000,000	No mortgage, convertible	8	April, October	Bost.	1860	101 1/2	101 1/2
Do. do.	600,000	Do. Do. do.	8	March, Sept.	"	1869	102 1/2	102 1/2
Milwaukee and Mississippi	600,000	1st mort. 1st sec. conv. till 1867	8	Jan'y, July	N.Y.	1862	95	96 1/2
Do. do.	650,000	Do. 2d do. do.	8	April, October	"	1863	95	96
Do. do.	1,250,000	Do. 3d do. do.	8	June, Decemb.	"	1877	88	89
New Albany and Salem	500,000	Do. 1st section	10	April, October	"	1865-62		
Do. do.	2,325,000	Do. oth. sec. conv. till 1868	8	May, Novemb.	"	1864-73		
Northern Cross	1,200,000	1st mortgage, convertible	8	Jan'y, July	"	1873	95	
Ohio and Indiana	1,000,000	Do. Do. do.	7	Feb'y, August	"	1867	90	
Ohio and Pennsylvania	1,750,000	Do. Do. do.	7	Jan'y, July	"	1865-66	95	96
Do. do.	2,000,000	Income, convertible	7	April, October	"	1872		80
Pennsylvania (Central)	5,000,000	1st mortgage, conv. till 1860	6	Jan'y, July	Phila.	1860	98	
Racine and Mississippi	600,000	Do. conv. sink'g f'd	8	Feb'y, August	N.Y.	1875	80	85
Scioto and Hocking Valley	300,000	Do. 1st sec. conv.	7	May, Novemb.	"	1861		
Steubenville and Indiana	1,500,000	Do. Do. convertible	7	Jan'y, July	"	1865		80
Terre Haute and Indianapolis	600,000	Do. Do. do.	7	March, Sept.	"	1866	98	100
Terre Haute and Alton	1,000,000	Do. Do. do.	7	Feb'y, August	"	1862-72	78	79
Do. do.	2,000,000	2d do. do.	8	Feb'y, August	"	1870	72	73

NAMES OF COMPANIES. (The following quotations include the accrued interest.)	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked.
Baltimore and Ohio	2,500,000	Mortgage	6	April, October	Balt.	1885	86 1/2	86 1/2
Do. do.	1,125,000	Do. Do. do.	6	Jan'y, July	Balt.	1875	87	88 1/2
Chicago and Rock Island	2,000,000	1st mortgage, conv. till 1868	7	10 Jan. 10 July	N.Y.	1870	92 1/2	92 1/2
Erie Railroad	3,000,000	1st mortgage	7	May, Novemb.	"	1867	104 1/2	104 1/2
Do. do.	4,000,000	2d mortgage, convertible	7	March, Sept.	"	1869	98	98 1/2
Do. do.	5,000,000	3d mortgage	7	March, Sept.	"	1863	99 1/2	100
Do. do.	4,000,000	3d mortgage	7	Feb'y, August	"	1875	93	94
Do. do.	4,351,000	Convertible, Inscription	7	Feb'y, August	"	1871	87 1/2	88
Hudson River	3,500,000	Convertible	7	Jan'y, July	"	1862	91 1/2	92 1/2
Do. do.	4,000,000	1st mortgage, Inscription	7	Feb'y, August	"	1860-70	99 1/2	100
Do. do.	2,000,000	2d do. do.	7	16 June, 16 Dec.	"	1860	87 1/2	89 1/2
Do. do.	3,000,000	3d do. convertible	7	May, Novemb.	"	1870	67	69
Illinois Central	17,000,000	Mortgage, inconvertible	7	April, October	"	1875	91 1/2	91 1/2
Do. (Free Land)	3,000,000	Mfg 345,000 acres priv. 7 shar's	7	March, Sept.	"	1860	100 1/2	101 1/2
Michigan Southern	1,000,000	1st mortgage, inconvertible	7	May, Novemb.	"	1860	95	98
New York and Harlem	1,500,000	Do. Do. do.	7	May, Novemb.	"	1861-72	83	85
New York and New Haven	750,000	No mortgage, do.	7	June, Decemb.	"	1875-80	81	82
New Haven and Hartford	1,000,000	1st mortgage, do.	6	Jan'y, July	"	1873	92	94
Northern Indiana	1,000,000	Do. Do. do.	7	Feb'y, August	"	1861	89	93
Do. Goshen Branch	1,500,000	Do. Do. do.	7	Feb'y, August	"	1868	84 1/2	86
New York Central	8,287,000	No mortgage, do.	6	May, Novemb.	"	1883	89	89 1/2
Do. do.	3,000,000	No m'ge conv. from June 57-59	7	15 June, 15 Dec.	"	1864	102 1/2	103
Panama, 1st issue	900,000	Convertible till 1855	7	Jan'y, July	"	1866	100	
Do. 2d issue	1,478,000	Do. Do. do.	7	Jan'y, July	"	1866	100	
Reading, issued 1843	1,573,000	Mortgage, inconvertible	6	Jan'y, July	Phila.	1860		
Do. do. 1844, '48, '49	1,300,000	Do. Do. convertible	6	Jan'y, July	"	1860	83	90
Do. do. 1849	3,469,000	Do. Do. inconvertible	6	April, October	"	1870	86	87

CITY SECURITIES.	Int't payable.	Off'd.	Ask'd.	CITY SECURITIES.	Int't payable.	Off'd.	Ask'd.
New York, 7 per ct. 1867	Feb'y,	100		Milwaukee, 7 per ct. coup.	X	Divers	85
Do. 5 do. 1858-60	May,	95	97	New Orleans, 6 per ct. ep. R.R.	X	Do.	74
Do. 5 do. 1870-75	August, and	96 1/2	96 1/2	N. Orleans, 6 per ct. ep. municipal	X	Jan'y, July	81
Do. 5 do. 1880	November,	94 1/2	96	Philadelphia, 6 per ct. 1870-98	X	Jan'y, July	91 1/2
Albany, 6 per ct. coup. 1871-81	Feb'y, August,	97 1/2		Pittsburgh, 6 per ct. coup.	X	Divers	74
Albany, 6 per ct. coup. 1871-81	Jan'y, July	76		Quincy, 8 per ct. coup.	X	Jan'y, July	85
Baltimore, 6 per ct. 1870-90	Quarterly	97	98	Racine, 7 per ct. coup.	X	10 Feb'y, Aug	
Boston, 5 per ct. coup.	X	97	99	Rochester, 6 per cent. coup.	X	Divers	95
Brooklyn, 6 per ct. coup. Long X	Jan'y, July	100	100 1/2	St. Louis, 6 per ct. coup. Long X	Do.	Do.	77 1/2
Clev'Pd, 7 per ct. ep. W.W. 1879 X	Do. do.	101	102	Do. do. Municipal	X	Do.	79 1/2
Cincinnati, 6 per ct. coup.	X	Divers	89	Sacramento, 10 p. ct. ep. 1862-74 X	Do.	Do.	72
Chicago, 6 per ct. coup. 1873-77 X	Jan'y, July	89	90	S. Francisco, 10 p. ct. ep. 1865, pay. N.Y. X	May, Novemb.		80
Do. 7 per ct. coup. 1880 X	Jan'y, July	100	100 1/2	Do. 10 p. ct. ep. 1871 X	Do.	Do.	85
Detroit, 7 per ct. ep. W.W. 1873-78 X	Feb'y, August	100	102 1/2	Do. 10 p. ct. pay. N.Y. X	Jan'y, July		85
Elkhart, 8 per ct. ep. Long X	March, Sept.	101	105	Do. 6 per ct. pay. N.Y. 1875 X	Do.	Do.	62 1/2
Jersey City, 6 p. ct. ep. W.W. 1877 X	Jan'y, July	94	96	Wheeling, 6 per ct. coup.	X	Divers	67 1/2
Louisville, 6 per ct. ep. 1880-83 X	Divers	78	81	Do. 6 p. ct. Min. 1874 X	March, Sept.		81
Memphis, 6 per ct. coup. 1882 X	Jan'y, July	67	70	Zanesville, 7 do.	X	April, October	97 1/2

## Cincinnati Stock Sales.

By HEWSON &amp; HOLMES.

For the week ending August 5th, 1866.

BONDS.		Per ct.
\$5,000 Little Miami, 6 per ct. 1st Mort.	80	(4 int.)
10,000 Cin. Wilm. and Zanesv. 7 per ct. 2d Mort.	45	
2,000 Hillsboro' and Cin. 7 per ct. 1st Mort.	45	
1,000 Indiana Central, 10 per ct. Income	95	
3,000 Marietta & Cin. 7 per ct. Domestic	80	
1,000 City of Wheeling 6 per ct.	65	
2,000 City of Allegheny 6 per ct.	73	
1,500 Columbus & Xenia, Dividend, 7 per cent.		
5 years.	90	
6,000 Cov. and Lex., 10 per ct. Income	50	
873 06 Little Miami, Dividend Scrip.	80	
STOCKS.		Per ct.
38 Shares Little Miami	90	
150 " Ohio & Mississipp.	6	
20 " Covington and Lexington	15	
118 " Marietta and Cincinnati	15	
3 " Cin. Ham. and Dayton	65 1/2	
40 " " "	65	
200 " Cin. & Chicago	3	
30 " Indianapolis and Cincinnati	55	
24 " Columbus and Xenia	82	
202 " Peru and Indianapolis	11	

By KIRK &amp; CHENEY.

For the week ending August 5th, 1866.

BONDS.		Per ct.
Little Miami, 6 per ct. Mort.	80	
Covington & Lexington, 2d Mort. 7 per ct.	65	
Ohio & Mississippi, 2d Mort. 7 per ct.	49	
Indianap. & Cin. 2d Mort. 7 per ct.	80	
Cin. Ham. and Dayton, 2d Mort. 7 per ct.	84	
Hillsboro' and Cin. 7 per cent. 1st Mort.	45	
Covington & Lexington, 10 per ct. Income	55	
Indianapolis and Cincinnati Dividend	70	
Columbus and Xenia Dividend, due Jan'y 1, 1861	87 1/2	
Do. do. do. due July 1, 1866	85	
Little Miami, Dividend Scrip. issued June, 1866	79	
STOCKS.		Per ct.
Bellefontaine and Indiana, 25—Cin., Ham. and Dayton, 67.		
—Col. and Xenia, 82—Cincinnati, 3—Covington & Lexington, 18—Dayton & Western, 17—Eaton and Hamilton, 20—Indiana Central, 60—Indianapolis and Cincinnati, 68—Little Miami, 89—Mad River & Lake Erie, 15—Marietta and Cincinnati, 18—Ohio and Mississippi, 6 1/2—Hillsboro' and Cincinnati, 16—Peru and Indianapolis, 15—Cincinnati, Wilm. and Zanesville, 14.		

## Marie &amp; Kans' Money Circular for the European Steamer of the 13th Inst.

[TRANSLATED EXTRACT.]

NEW YORK, Monday, Aug. 11, 1866.

Our last report was dated Aug. 5. Since the stock market has been more active, but almost universally at declining prices. The greater demand for money, already noticed in our last, has rather increased than otherwise, and many stocks—almost exclusively the speculative ones—have been forced on the market in anticipation of a greater activity in money. The orders for our stocks from Europe by the last mail were to a very fair extent, but still not sufficient to check the general downward tendency of our market. State Stocks.—The sales have been small this week, with very few fluctuations. Virginia declined 1/2; California 7s, 1870 sold at a decline of 3 per cent., but those of 1875 brought again 70; Missouri rose 1/2. City and County Bonds.—There has been some demand for St. Louis City and County Bonds at better prices, the supply of these securities becoming very limited. The transactions in other bonds have been small. Railroad Bonds.—The sales of Illinois Central bonds have again been extensive; they close at a decline of 1/2. Freeland bonds, with privilege, sold at 3/4; and Erie 1883 bonds at 1 per cent. advance. N.Y. Central, 1869, fell off 1, and Erie 1871 bonds 1/4. Several lots of Michigan Central 1869 bonds were also bought for Europe at 102 1/2; also, some La Crosse and Milwaukee, Racine and Mississippi, Milwaukee and Mississippi, and Galena and Chicago 1st mortgage bonds. Railroad Shares.—The whole list shows a decline, varying from 1/2 to 2 1/2 per cent., except Illinois Central, which sold at an advance of 1/2 per cent. Erie declined 1 1/2; Reading, 1 1/2; N.Y. Central, 1; Michigan Central, 1; Michigan Southern, 1 1/2; Cleveland and Toledo, 2 1/2; Chicago and Rock Island, 1 1/2; Cleveland and Pittsburgh, 1 1/2; Milwaukee and Mississippi, 1 1/2; Harlem, 1 1/2; Panama, 2 1/2. The transactions have been pretty lively in almost all stocks, but in Erie and Reading more particularly so. Money.—The demand has been more active than for the past week. Loans on call, 7 per cent. discount; 7 1/2 for first class bills; 9 1/2 for names



less known; stock contracts, 10c15 per cent. Exchanges.—Very little doing, with hardly any alteration in rates. London, 109 $\frac{5}{8}$  $\frac{1}{2}$ ; Paris, 5.1745.16. MARIE & KANZ.

Extract from De Coppet & Co's Money Circular for the European Steamer of the 13th inst.

[TRANSLATED.]

NEW YORK, Monday, Aug. 11, 1856.

There is no very striking alteration to notice in our stock market since our advices of 5th instant. Specie shipment, which, without being on an increased scale, continues steadily, does somewhat attract attention. Money, although easy to procure, is nevertheless in more active demand. This has brought about more freedom in transactions, especially in the more speculative stocks, but with heaviness in prices, which are generally lower than by last week's quotations, if we except three or four of the bonds, for which there was some foreign demand. On the whole, owing both to a desire to realize on speculative shares and to the execution of some European orders, there has been less dullness than the previous week. Besides these regular transactions, the negotiations which we notice below would indicate that, spite of the general indisposition to buy new issues of Western railroad securities, when some of them are presented which appear undoubtedly well based, they still find takers. State Stock.—There was a fair demand for Virginia 6s, Indiana 5s, and particularly for Missouri 6s, the two former at  $\frac{3}{4}$  and  $\frac{1}{2}$  decline, the latter at an advance of  $\frac{1}{2}$  per cent.—City and County Bonds.—We have but a few retail sales to notice of St. Louis City and County 6s, Albany 6s, both at rather better prices; also of Pittsburgh 6s, (municipal,) which sold higher than our quotations for railroad issues. Railroad Bonds.—There was but a very moderate amount done of Illinois Central Construction at a decline of 1c; Freeland rose  $\frac{1}{2}$ , with very few sales.—There was a fair demand for New York Central 6s, which are 1 per cent. lower, and for Erie 7s of 1871 and 1883; the latter at 1 per cent. advance. At private sale there were transactions of some amount in Michigan 8s, 1869, and in Milwaukee and Mississippi, first mortgage, third section, without any marked fluctuations. We notice the negotiation of an issue of \$350,000 first mortgage bonds on the first section of the Burlington and Missouri railroad, (Iowa). These bonds bear 8 per cent. interest, are redeemable in 1876, and have the privilege of convertibility in the shares of the company till 1871. A sinking fund of 2 $\frac{1}{2}$  per cent. annually is provided for in the mortgage deed. We give below further details about these bonds, the road, and the grant recently made in its favor by the Government of the United States of public lands. Railroad Shares.—The decline is without exception, and in some cases rather heavy. There has been some movement in Erie, New York Central, Reading, and Cleveland and Toledo, and to a less degree in Michigan Southern, Cleveland and Pittsburgh, and in Chicago and Rock Island. Panamas with few sales have declined 2 $\frac{1}{2}$ . Money is in better demand, 7 for call loans. Paper—8c9 for first class.

DE COPPET & CO.

#### Berths in Railroad Cars.

The Illinois Central railroad is now introducing upon their road a new style of passenger cars, which are far ahead of anything in that line yet in the West. Some of these contain six state rooms, each having two seats with cushioned backs long enough for a person to lie upon. The back of the seats are hung with hinges at the upper edge, so that they may be turned up at pleasure, thus forming two single berths, one over the other, where persons may sleep with all the comfort imaginable. In one end of the car is a small wash-room, with marble wash-bowl, looking-glass, &c. On the opposite side of the car, from the state-room, is a row of seats with revolving backs similar to barber's chairs, so arranged that the occupant may sit straight or recline in an easy atti-

tude at pleasure. The other cars have each two or three similar state-rooms.—Exchange.

## American Railroad Journal.

Saturday, August 16, 1856.

### Syracuse and Binghamton Railroad.

In another column will be found an advertisement of the sale of the Syracuse and Binghamton railroad, which is to take place on the 20th of September next. The sale is on behalf of the first mortgage bondholders.

The Syracuse and Binghamton railroad connects the above towns by a line of 80 miles in length. It is well built, and is now in excellent running order. It has an ample equipment, costing about \$250,000. The road is also well provided with depot and station buildings. The track has a gauge of 6 feet, and is laid with a heavy T rail. The total cost of the road at the date of the company's last report was about \$2,400,000. The total issue of first mortgage bonds is \$1,200,000.

The road we have always believed to be a valuable one, and with improvements contemplated and now on the point of being carried out, may be made productive on its entire cost. A leading object in its construction was the formation of a continuous line of railroads from the coal fields of Pennsylvania to Syracuse and Oswego. This object has not yet been accomplished, which is one reason for the recent embarrassments of the Company. There, however, appears to be no doubt that this connection will be speedily formed by the construction of a new road from Oswego to Syracuse, which will bring the Syracuse and Binghamton railroad in connection with the Erie Canal, the salt works of Syracuse, as well as with Lake Ontario. The demand for coal from all these points is very large and is rapidly increasing. There appears no doubt that its transportation would yield a very large income. The coal trade to the Lakes would be followed by a reciprocal one toward tide-water. Taken together they would very soon afford an ample business for the support of the road.

Though the road has a fair local business, and one in passengers much above the original estimate, yet a great prospective value results from its relations to Oswego, the chief commercial town on Lake Ontario. This is by far the nearest Lake port to tide-water, and is consequently on the cheapest route for all the territory dependent upon the great Lakes. Owing to this fact, the growth of its commerce has exceeded in ratio that of any other Lake port, and, as it seems probable, is soon to exceed that of any other connected with the Eastern trade. By means of its immense water power, it is already one of the leading manufacturing towns in the State, particularly in the article of flour. It is also the great entrepot for the Canadian trade, which has already become one of immense magnitude and importance since the establishment of reciprocal free trade with the British Provinces. A railroad connecting such a point as Oswego with the coal fields and with New York cannot fail to have a business of a first class work.

The total cost of the road according to the last report to the Legislature, was \$2,272,777. Total

earnings for the first year after its opening was \$172,000. The proposed connections would undoubtedly soon treble this sum, making the road a good property upon its entire cost.

### The Locomotive.

No. 6.

By THEODORE KRAUSCH, Civil and Mechanical Engineer.

The results already mentioned in regard to the strength of the different kinds of rivetings, are of course dependant on the dimensions of the rivets used and thickness of iron. The diameter of the rivet, their distances from centre to centre, and the distance from the rivet to the edge of the sheet, are the most important points to be considered. Each must have a proportion that will enable all to resist equally. Riveting may be divided into three classes, namely:

1st. The sparse riveting, with strong rivets; which have the advantage of great strength, in comparison with the 2d close riveting, with small rivets; which are used where density is demanded. The 3d kind, with moderately strong rivets and medium riveting, will answer when both great strength and density are required. Hence the character of the boiler determines the kind of riveting to be used. No. 3 will correspond to the character of a locomotive boiler. For the details of its application, the following rules are recommended:

Thickness of the boiler iron

×2 gives the diameter of the rivet.

×4 " diameter of the rivet head.

×4 " distance from the centre of the rivet to the end of the sheet.

×5 " distance from centre to centre of the rivet.

At present, a machine for working the riveting is employed in large shops. This machine has been lately perfected. It operates by a lever, moved by steam; while one piston is riveting the head, a stamper calks the other end. The riveting is thus made perfect, and the noise of the old practice in a great degree avoided.

The principal points relating to the construction of boilers, have now been considered.

The examination of the parts which are required to give the boiler entire security, and also of those parts which influence the combustion, and therefore the steam production, will be next discussed.

We know the size of a boiler depends upon the greatest quantity of steam to be consumed per stroke in a certain time. Suppose the train reaches a descending grade, where possibly no steam is wanted, or at most a trifling quantity, the production though not entirely suspended is then diminished, and the blast consequently weakened. It amounts to  $\frac{1}{6}$  of the greatest quantity which can be produced. If no arrangement were made to remove this quantity, the pressure in the boiler would gradually increase, in proportion to the degree of production; an explosion would be the result. The safety valve is the arrangement which allows this over-plus of steam to escape in such proportion, that the steam pressure does not increase beyond a given point. It also allows the escape of superfluous steam, when the generation is most active. Hence, then, the proportion of the safety valve depends on the proportions of the boiler or on the steam production. The proportional diameter of the valve, its load and freedom of play, are the important considerations to receive



attention in its construction. To determine the diameter, it is necessary to understand the law of the velocity of steam escaping under a certain pressure into the atmosphere. Theory teaches, that steam escapes into a vacuum with the velocity that a body would attain by falling from a height equal to that of a column of steam, of uniform density, whose weight is equal to the pressure of steam.

Steam of one atmosphere, or 2.49 feet barometrical pressure, is nearly 1,700 times lighter than water, consequently  $1,700 \times 13.6 = 23,120$  times lighter than quicksilver; a column of steam of such pressure, would be as high as  $2.49 \times 23,120 = 57568.8$  feet.

A body falling from this height, in a vacuum, will receive a velocity per second=

$$\sqrt{2 \times \text{double space of fall at the first sec'd} \times 57568.8} \\ = \sqrt{2 \times 32.17 \times 57568.8} = 1,924 \text{ feet.}$$

The height, producing such velocity, could also be found, by multiplying the height of the column of quicksilver, which indicates the pressure of the steam, by the proportion of density of the quicksilver to the steam. The weight of one cubic foot of quicksilver=849.2 pounds; the weight of one cubic foot of steam of one atmosphere=0.0368 pound; consequently their proportion of pressure  $\frac{849.2}{0.0368}$  and the height which produces

$$\text{the velocity} = 2.49 \times \frac{849.2}{0.0368} = 57568 \text{ feet; and the} \\ \text{velocity per second=}$$

( $2 \times \text{double space of fall, at the first second} \times$  by the height of the column of the quicksilver; indicating the pressure of the steam  $\times$  by the proportion of the pressure of the quicksilver to the steam.) $\frac{1}{2}$

Some changes are necessary in this formula, to adapt the result to steam, escaping into the atmosphere. Instead of the figure, representing the height of the column of quicksilver, indicating the steam pressure, the figure expressing the proportion between the barometrical difference of the steam pressure to the atmospherical height of the quicksilver, must be inserted. The pressure of the steam and its weight, we see, are necessary elements in the formula. To illustrate: let the pressure of the steam be 6 atmospheres; weight of one cubic foot 0.1894 pound and its barometrical pressure equal to 11.35 feet.,

$$\left( 2 \times 32.17 \times (11.35 - 2.49) \times \frac{849.2}{0.1894} \right)^{\frac{1}{2}} = 1598.84 \\ \text{feet per second. This figure multiplied by the} \\ \text{area of the safety valve opening, gives the quanti-} \\ \text{ty of steam escaping from the safety valve per} \\ \text{second. An important result arises from the} \\ \text{above formula, namely: that, the higher the} \\ \text{pressure of steam, the greater its velocity; conse-} \\ \text{quently, the higher the steam pressure, the small-} \\ \text{er the diameter of the opening. The French gov-} \\ \text{ernment orders the following formula, to regulate} \\ \text{the diameter of the opening.}$$

$$2.6 \left\{ \frac{\text{heating surface of boiler in sq. meters.}}{\text{the effective steam pressure} = 0.412.} \right\}^{\frac{1}{2}}$$

The method of finding the corresponding direct load upon the safety valve, is very simple. The formula is as follows: Interior valve surface  $\times$  (steam pressure—the outside atmosphere.) The product is the pressure against the valve, consequently, the load upon the valve (when its own

weight is included) must be equal to the pressure, acting against the valve. If the load acts indirectly upon a lever arm  $n$ , the valve upon a lever  $b$ , the static momentum of the valve being  $o$  and  $k$  the steam pressure against the  $\times$  valve, the corresponding load  $L = \frac{kb-o}{n}$ . These rules are still

somewhat imperfect, especially if the face of the valve and of the seat is not very narrow; because the pores of the metal, near to those surfaces, are filled with steam, besides the air; consequently the surface of the pressure, will be somewhat larger than  $3.1416 \times r^2$

The easy lifting of the valve depends upon its shape. An even narrow valve seat, will answer the purpose better than a conical seat. The best attested proportion, between the interior diameter of valve and the width of the valve face is recommended as  $\frac{1}{30}$ .

The over-loading of the valves, through the ignorance of the engine-driver or his incompetency, might cause great damage, and an explosion be expected. To remove this danger, it is necessary to apply two safety valves: one of them may be accessible to the engine-driver, the second be loaded something higher, and its lever arm placed inside the boiler, whereby the valve becomes inaccessible.

#### Gardiner's Volute Spring for Cars.

We have neglected till now to call attention to the compact and highly elastic steel spring, invented by Mr. P. G. GARDINER, of this city; not on account of any lack of importance in the subject, but from a wish to ascertain its actual durability in practice. The spring has now been upwards of a year in use under the iron horse cars of the Sixth-av. Railroad in this city, and for several months under passenger cars running in express and other trains on the Hudson River, and some twenty or more other railroads, without a single case of failure coming to our knowledge. A company has been formed, and arrangements completed for manufacturing these springs in the most perfect and rapid manner, and each spring is carefully tested by apparatus constructed for the purpose before being sent out. The manufactory is on Twenty-sixth street in this city, and is provided with a powerful steam engine, large and well arranged heating furnaces, and with new and admirably contrived machinery for producing the springs with little labor, and keeping the delicate structure of the steel in the best possible condition. A strip of good cast steel about five feet long,  $4\frac{1}{2}$  inches wide, and  $\frac{1}{4}$  of an inch thick is wound up so as to form a low cone or sugar-loaf, but without allowing any of the coils to touch each other. It is then tempered in oil, and finally put to a severe trial in the testing machine. The load is allowed to bear constantly upon the point, or apex of the cone, and it is found in practice that this compact, strong, and extremely elastic spring, in addition to its other qualities, possesses the important one of springing to very nearly an equal amount with any given shock whatever may be the load supported. The whole may be enclosed in cast iron housings or not, as preferred, but in either case it promises all the compactness and ease of the rubber spring with more than the durability and economy of the ordinary elliptic one.

#### Ohio and Pennsylvania Railroad.

A report recently made its appearance, signed by Thomas W. Bartley, Dwight Jarvis, and William Bagaley, styling themselves a committee appointed by the stockholders of the Ohio and Pennsylvania railroad, to whom was referred the report of the committee appointed in 1855 to investigate the affairs of the company, the conditions of the accounts, etc., etc.

This report of the stockholder's committee, as it is termed, is chiefly characterized by a spirit of bitter hostility against the former management of the road, and particularly against Gen. Wm. Robinson, its President, during the entire period of its construction, and for several years thereafter.—The report charges that in the accounts of the company, \$951,902 remain to be accounted for, and attempts to throw upon Gen. Robinson the responsibility for the deficiency. This report is seized hold of by our city papers, ever eager to fill their columns with gossip, no matter on how slight a foundation, and produces for the moment quite a sensation as another case of railway mismanagement, or misconduct, on a stupendous scale.

The following is a correct abstract of their balance sheet, taken from the books of the company:

	DR.
Road, equipments, offices and stations.....	\$5,014,621.03
Profit and loss.....	448,106.19
Bills receivable.....	266.80
Stock in other roads.....	162,500.00
Bonds of other companies, including hypothecated.....	413,000.00
Acc'ts with brokers and bankers.....	42,923.93
Gas company.....	753.75
Ass't Treasurer's acc'ts.....	16,428.60
Individual balances.....	8,876.05
J. J. Brooks, to pay taxes in Ohio..	14,842.50
Unsettled stock.....	261.91
Wm. Larimer, Jr.....	86,381.93
Cash.....	15,495.86

Total.....\$6,227,458.55

	CR.
Capital stock.....	\$2,458,240.00
Income bonds.....	1,469,000.00
Mortgage bonds.....	1,750,000.00
Bills payable.....	518,150.31
Winslow, Lanier & Co.....	20,825.60
John Larwell.....	260.07
Wm. Robinson, Jr.....	6,952.32
Unpaid dividends.....	4,030.25

Total.....\$6,227,458.55

To the debit side, the stockholder's committee added the net earnings, \$1,082,027, (since the road went into operation,) but which do not belong to this account, and are satisfactorily accounted for in another place.

The great discovery of this committee is simply a blunder of their own making. Every cent received by the company, or its officers, is satisfactorily accounted for by proper vouchers. There appears to be no doubt that these groundless charges were made in a spirit of hostility to Gen. Robinson, and with an earnest hope that they might prove true.

While upon this subject, and while exculpating General Robinson from the censure sought to be thrown upon him, it may be proper to add a word of our own. We happen to be pretty familiar with the history of the Ohio and Pennsylvania Railroad. It was commenced among the first of our newly built western roads; and consequently



with very inadequate notions and estimates as to its probable cost, and still more inadequate preparation of means. These soon began to be exhausted with the progress of the work, leaving no other alternative for a further supply than the credit of the Company. Now there is no doubt that the road owes its construction to a good credit, mainly secured to it through the instrumentality of General Robinson. In this way he created the means for construction as he proceeded with the work. In no other way could the road have been built; and we certainly know of no other man who could have carried it out, or who could have brought to his aid such powerful coadjutors. Under his administration, no enterprise more entirely commanded the confidence of capitalists, and no work, depending mainly upon its credit, proceeded more steadily towards its completion. Its great success measures the extent of the labors of its President, which, for years, were incessant, and aggravated by a constant anxiety which the necessity of borrowing to meet daily expenditures, imposed. Neither the people of Pittsburgh, nor of Central Ohio, nor of Pennsylvania built the Ohio and Penn'a R. R., but strangers to all these, and whose confidence General Robinson secured.

We are not accustomed to be personal in this manner we have; but when we see a meritorious public servant, who has built one of the great works of this country, maliciously slandered, we think it but just that his neighbors and the public should know what he is and what he has done for them.

#### Railroad Earnings for July.

The receipts of the Hudson River railroad for July, 1856, were.....\$120,991  
Against July, 1855.....119,494

Increase.....\$1,497

The receipts of the Galena and Chicago railroad for July, are:

	1855.	1856.
Freight.....	\$121,358	\$141,550
Passengers.....	62,606	80,269
Mails, &c.....	1,955	3,889

Total.....\$185,929 \$225,650  
Increase.....\$39,729

The receipts of the Illinois Central in July were \$197,440, against \$180,000 in July last year.

The receipts of the Reading R. R. in July were:

	1855.	1856.
Received from coal.....	\$231,592	\$326,889
Received from merch'dise..	26,535	26,806
Rec'd from travel, &c.....	26,712	29,143

Total.....\$384,839 \$382,339  
Transportation, dumpage, roadway, renewal fund, and all charges.....187,900 70,133

Net profit for the month...\$216,845 \$212,206  
Net profit for previous six months.....665,900 977,086

Total net profit 7 mos.\$882,745 \$189,292

The receipts of the Little Miami railroad for the month of

July, 1856, were.....\$93,352  
July, 1855.....68,896

Increase equal to 35 per ct.....\$24,456

The earnings of the Milwaukee and Mississippi road in the month of July amount to \$60,183, against \$47,158 same month last year. The earnings of the La Crosse and Mississippi railroad for the same month were \$46,676. Last year the

line was not opened in July. The present earning is on 61 miles, at a cost of \$26,500 per mile.

#### Mississippi Central Railroad.

REPORT OF THE DIRECTORS TO THE STOCK-HOLDERS.

Gentlemen—In compliance with the provisions contained in the original act incorporating your company, and in behalf of the Board of Directors, I have the honor to submit, for your consideration, this Fourth Annual Report:

During the fiscal year now just closed, the work of construction on the line of your road has been steadily and perseveringly prosecuted by the Directory, with all the means they could command, without a resort to credits, or the ruinous policy of obtaining funds at high rates of interest, that would result injuriously to the value of your investment, and detrimental to the future credit of your company. If the amount of work accomplished, during the year, has not equalled your expectations, it has been only limited by the am't of funds that could be collected from subscribers to the capital stock of your company.

Although the amount of work under contract, at the time of your last annual meeting, was greater than desired in the then pecuniary condition of the country, the engagements of the company have been met with a punctuality satisfactory to all parties interested.

That portion of the road-track between Holly Springs and the junction with the Memphis and Charleston road—a distance of about 25 miles—was not completed and in readiness for the cars until the 22nd day of November last, a period of the year when a very large portion of the cotton crop of the country had been forwarded to market. The burthen cars necessary for the movement of freight offered for transportation, were not delivered until the 5th of December, although by the stipulations of the agreement for their construction, they were to have been delivered in the previous month of October. The delay in the delivery of the burthen cars, and the completion of the road-track to Holly Springs, materially lessened the amount of freight traffic that otherwise would have been transported over the division of the road here referred to.

By reference to the report of William M. Stockton Esq., Chief Engineer and Gen. Superintendent of your road, (herewith submitted for your consideration and marked "A,") it will be seen that the gross receipts of that division of your road, now in operation, for the six months ending on the first of the present month, have been as follows:

From Passengers.....	\$11,830 68
From Freights.....	16,943 50
From Mail service.....	1,200 00

Making the total of gross receipts....\$29,974 18  
The expenses during the same period of time of operating this portion of your road, including repairs of track, cars and locomotives, the cost of oil, fuel, &c., has been.....11,233 02

Which, taken from the gross receipts, leaves a net income of.....\$18,741 11

The expenses incident to the transportation of iron rails, and other materials for the construction of track and road-bed, are included in the above item of expenditure without a corresponding credit to the receipts of the road. To exhibit correct results from the working of the road, the sum of \$4,150 should be added to freight account for the transportation of materials; should this be done, the net income of the road, for six months, would be \$22,891 11, instead of \$18,741 11, as above stated.

The injurious effects of the severe frosts and heavy rains of the past winter upon the recently constructed earth-work, forming the road-bed, increased in no small degree the expenses of track repairs. It is believed that in consequence of the more firm condition of the road-bed, and more perfect drainage, that in future this extra expense

will be very much diminished, if not entirely obviated, even though we should again experience such an unusually inclement winter as the last.

The Engineer in Chief, in his report, already referred to, estimates the cost of the work yet to be executed, and materials to be supplied for the completion of the road-bed and superstructure between Holly Springs and Oxford, and from Canton north to a point on the line of road in Holmes county, near the Williams Ferry road, embracing a distance of 55.89 miles, at \$249,261.

The estimated cost of work to be executed, and materials to be furnished to complete the road-bed, and lay down the superstructure on the division of your road extending from Oxford to Grenada, a distance of 46 miles, is 530,926 39, and the estimated cost of completing the road for operation from Grenada to the Williams Ferry road, in Holmes county, a distance of 60½ miles, is 653,525 08.

From these estimates, it appears that the cost of the unfinished work, and materials necessary to complete the road between Holly Springs and Canton, exclusive of materials now on hand, and exclusive of depot buildings and equipments, is \$1,433,712 47.

Additional equipments will be required during the present year to successfully operate the anticipated extension of your road-track to the estimated amount of \$80,000.

In the estimates here made, as to the cost of the unfinished portion of your road, the value of the iron rails, the principal item in future expenditures, is based on its present market price, and at an increased value of nearly ten dollars per ton over the estimate in my last Annual Report. The price paid for iron rails when purchased, may increase or diminish the amount of present estimates.

Contracts for the erection of all the Truss Bridges on the line of road have been made with an experienced bridge builder, who is now engaged with a large party of hands in the erection of the bridge over the Big Black, which will be in readiness for the rails by the time the track is laid from Canton to it.

Contracts favorable to the company have also been made for all the Trestling on thirty miles of the Southern division of the road, and on that part of the Northern division, extending from Holly Springs, south to Oxford. A large amount of the timber for the trestling here referred to, has been delivered on the line of road, a portion of it framed and in readiness for erection.

A contract has also been entered into with an experienced track-layer for laying down the superstructure on the Northern and Southern division of the road. The party with whom this contract has been made, is now in readiness with a large party of hands to commence, and energetically prosecute the work undertaken by him.

Anticipating the completion of the road-bed from Holly Springs south, to Oxford, and from Canton north, a distance of some 80 miles, within the term limited in the several contracts embracing that portion of the work, purchases of iron rails, chairs and spikes, were made last fall, to be delivered in New Orleans, during the winter and spring months, preparatory to the re-commencement of track-laying, nearly the entire amount of which has been delivered, and the residue will soon be; but the unusually inclement and cold weather of the past winter retarded the work of many contractors to such an extent, that they have not, even at this time, completed the work undertaken by them; and others, I regret to say have disregarded the obligations contained in their agreements for the performance of work on the road-bed, and the Directory, to avoid long continued delay in the extension of the track, have been compelled to increase the effective force on some of the contracts referred to, at the expense of the contractor.

These causes have delayed the re-commencement of track-laying, but the work on the unfinished portions of the road-bed is now progressing in a manner that gives assurance of its speedy



completion, and as the iron, chairs, spikes and ties, are now at command, a much longer delay in the prosecution of the work of laying down the superstructure need not be apprehended.

The Legislature of this State, at its recent session, passed a law authorizing a loan of \$400,000 of the proceeds of sales of the Chickasaw School Lands to the several railroad companies therein named, for the term of seven years, with interest at the rate of eight per cent. per annum, payable semi-annually in the city of Jackson. The Directory accepted of the provisions of the law here referred to, and the Treasurer of your company has obtained from the State, on account of this loan, the sum of \$95,850, and the additional sum of \$104,150 will be hereafter obtained from the same source whenever paid into the State Treasury to the credit of the Chickasaw School Fund.

The Legislature also authorized the issuance to your company of Internal Improvement Land Scrip to the amount of 50,000 acres, to be sold on account of the State, at a price limited at \$1.75 per acre, if sold for cash, and the State to be reimbursed for the scrip so issued and sold, by an issuance of certificates to the capital stock of your company, to an amount equal to the scrip sold, estimating its value at the price limited by law. The land scrip was received by your Treasurer from the State, and sales have been made to the extent of 39,000 acres, and no doubt is entertained but that the residue will be sold in a very short time.

I have the honor, also, to submit for your consideration, the reports of A. J. McConnice Esq., the Secretary of your company, marked "B," and the report of D. B. Molloy Esq., Treasurer, marked "C." The first named report exhibits all the fiscal transactions of the company from its organization to the present time, and the second embraces the receipts into and the disbursements from the Treasury during the fiscal year.

It appears from the report of the Secretary, that there has been paid into the Treasury on account of—

Capital Stock .....	\$1,211,857 86
Chickasaw School Fund Loan .....	95,850 00
Interest and Company Bonds .....	27,194 80
Receipts from road .....	29,974 13
Other sources .....	183,067 79

Total payments into the Treasury..\$1,547,944 58

There has been drawn from the Treasury, on account of Real and Personal Property, Engineering, Rights of Way, Graduation, Bridges and Trestling, Depot Grounds and Buildings, Iron Rails, Track-laying, &c. ....	\$1,248,488 02
Salaries, Printing, Stationery, Attorneys' Fees, Court Costs and Expenses .....	29,759 84
Rolling Stock, Repair Shop and Fuel .....	62,634 27
Running Expenses and Repairs of Road and Cars .....	11,238 02
Loss, Damage, Discount and Interest, &c. ....	5,111 05

Making total expenditures..\$1,357,228 20

There remains in the hands of the Treasurer, cash and reliable cash assets, to the amount of \$190,718 38.

The item of bills payable, exhibited in the report of the Secretary, is almost entirely made up of notes issued in part payment for iron rails, chairs and spikes, and are not payable until March, April and May of next year.

There remains unpaid, on account of subscriptions to the capital of your company, the sum of \$583,797 08. Of this amount \$245,538 57 is payable by the counties of Marshall, Lafayette, Yalobusha and Holmes, in the years 1867, 8 and 9, with the exception of \$29,410 58, which is now due and payable.

The sum of \$228,258 51 is now due on individual subscriptions to capital stock. Of this amount the Secretary estimates \$60,000 as doubtful and worthless, leaving \$228,258 21 of reliable

individual subscriptions applicable to future construction.

The Treasurer, D. B. Molloy Esq., reports the receipts into the Treasury during the fiscal year, ending on the first of the present month, to be as follows, on account of—

Capital Stock .....	\$569,274 59
Interest and Exchange .....	8,384 79
Chickasaw School Fund Loan .....	95,850 00
Company Bonds .....	16,920 00
Freights, Passengers and Mail .....	29,974 13
Bills Payable .....	95,480 60
Bills Receivable .....	20,000 00
Reserved Fund .....	48,967 62

Total payments into the Treasury during the fiscal year.....\$884,781 63

There was in the hands of the Treasurer, at the date of his last annual report, the sum of \$5,558 24.

This, added to the receipts, during the year, makes a total of \$890,384 87.

The disbursements by the Treasurer, during the same period, have been \$699,616.49, and on the following:

Graduation, Trestling, and Engineering .....	\$364,085.77
Depot and Water Stations .....	7,681.88
Superstructure .....	17,882 28
Iron and Equipments .....	279,271.19
Salaries, Printing, Attorneys' Fees and Expenses .....	13,632.43
Real and Personal Property .....	719.87
Discount, interest on Bonds, expenses of operating road, loss, damage, &c. ....	14,481.12

Total disbursements for the year.\$699,616.49

Leaving in the hands of the Treasurer of cash and other available assets to the amount of..... 190,718.38

At your last annual meeting, a committee of Stockholders was appointed to examine the books and accounts of your various officers and agents, and the condition of your road and its equipments, and to report the result of their investigation to this meeting.

The committee then appointed have neglected to discharge the duties assigned them. In consequence of this neglect, I, without authority from you, appointed three intelligent stockholders of Marshall county to perform the duty assigned by you to others. The report of the examination made by them is herewith submitted for your consideration.

The duties devolving on our examination committee, are of too important a character to be omitted, or carelessly performed. The security and protection of your property, the safe keeping and disbursement of your funds, the faithful discharge of the duties of each and all the officers and agents of the Company, involves much too large an amount to be committed to the care of any man or number of men, however honest, without frequent critical examinations into all of their acts.

I have, therefore, to recommend that a committee be appointed by you to discharge this duty the present year, and that authority be delegated to some one to fill any vacancy that may occur in said committee.

I have been instructed by the Board of Directors to recommend to your favorable consideration the propriety of reducing the number of members now composing the Directory. By the provisions of your charter you are authorized to reduce the number of members composing the Board to any number of not less than five. It is for you to determine if the success of the road will be best promoted, and your interest better protected, by a reduction of the number of Directors, or otherwise.

In the preceding part of this report, it has been stated that the Chief Engineer estimates the cost of completing the unfinished road-bed and laying down the superstructure, from Holly Springs to Canton, at \$1,433,712.47, exclusive of depot buildings, station houses and repair shops.

An expenditure to the estimated amount of \$80,000 will be required this year for additional equipments to supply the demands that will be made on the company for the movement of freight on the anticipated extension of road-track.

The assets of the company to meet this expenditure, and to pay its present liabilities are as follows:

Cash and cash assets now in the hands of the Treasurer of the Company .....	\$190,718.38
Amount of reliable individual subscriptions, after deducting such as are now considered worthless .....	228,258.51
Amount of county subscriptions payable in this and the three succeeding years, by direct taxation on the property in the counties .....	245,538.57
Amount of Bonds of the State of Tennessee to be received from the Mississippi Central and Tennessee Railroad Company .....	50,000.00
Estimated amount yet to be derived from the proceeds of the sale of Internal Improvement land by the State .....	128,000.00
Amount yet to be obtained by virtue of the law authorizing a loan to this company of a portion of the Chickasaw School Fund .....	104,150.00

Total assets.....\$946,665.45

From this sum must be deducted the present liabilities, of the Company amounting to..... 183,067.79

There remains a balance of.....\$763,597.67

Applicable to future construction, and exhibiting a deficiency in the estimated sum necessary to complete the road of \$670,114.80, exclusive of necessary expenditures for equipments, depot buildings and station houses.

Should the track of the road be extended south from Holly Springs to Oxford, a distance of about thirty miles, and from Canton north about the same distance, by the first of January next, as is now confidently anticipated, it is believed that the net income of the road the present fiscal year will not fall short of \$75,000. If there is no disappointment in this particular, then the working of the finished portions of the road will furnish an amount of funds equal to the estimated cost of the additional equipments that will be required for its operation.

From the preceding estimates and statements, it appears that the reliable assets of the company fall short of the estimated cost of the work you have undertaken to the amount of \$670,114.80.—How shall this deficiency be supplied, and what measures adopted to obtain speedy payments from delinquent subscribers to the capital stock of your company, are questions necessary to be solved, if you desire an early completion of the road.

It is undeniably certain, if the assets of the company can be realized during the present and succeeding year, and sales of the company bonds to the amount of \$800,000 or \$900,000 can be effected during the same period of time, the entire road can be fully completed and equipped by the first of January, 1868. Of this there at present exists no reasonable doubt.

With these sums at the command of the Directory, the work of track-laying, when re-commenced, need not be again suspended until the whole is accomplished. With a prospect so desirable in view, so beneficial to your interest, so advantageous to the whole community, duty impels me to appeal to each and all delinquent stockholders for prompt and immediate payment of all balances due by them, and to those stockholders who have complied with their engagements to the company with a promptness and punctuality worthy of all praise, I appeal for further aid. If you desire to render your stock profitable and the road beneficial, it must be completed. To speedily accomplish this object, I earnestly and respectfully urge upon all stockholders an investment in the bonds



of the company to an amount equal to the stock held by each.

There is another class of citizens to whom I also appeal for aid in making up the deficiency in the estimated cost of your road. I refer to those wealthy citizens of our State who, to the present time, have extended to you no willing aid in a work that must, when completed, result in great benefit to them as well as all other classes of the community. It is well known, that in the past progress of the work now under consideration, the company have been mainly dependent for the funds expended, not upon the wealthy residents on the line of road or in the State, but upon the middling classes, as regards individual wealth; while the former have looked idly, even coldly on your efforts, giving no encouragement, but, instead thereof, predicting loss to the stockholders and failure to the enterprise, the latter have pushed forward the work to its present favorable condition.

The sale of any considerable amount of the bonds of the company to citizens of our State, would have a tendency to impart additional value to those you may be compelled to dispose of abroad. If those who are supposed to be best acquainted with the importance, value and probable traffic of the road give evidence of the security of the bonds by investing in them, then may we reasonably hope that capitalists in other States may be willing to follow the example of our own citizens, and invest in them also.

It is not proposed to issue more than \$5,000 to each mile of road, and the payment of both principal and interest on this limited amount is secured by a mortgage on all the property and effects of the company, rendering the security good beyond all reasonable doubt.

The railroads with which yours connects at its northern and southern termini, are rapidly progressing towards completion. It is in contemplation to complete the New Orleans, Jackson and Great Northern road to the town of Canton by January, 1858. Efforts are being made, which, if successful, will insure the accomplishment of an object so advantageous to you, and beneficial to our whole State.

The iron rails on the Mississippi Central and Tennessee road, being the northern extension of yours, are now being laid down, and the track will be completed to Jackson, Tenn., before the close of the present year.

The Memphis and Charleston is fast approaching completion, and in a very few months, railroad communication will be opened from the northern terminus of your road to the city of Charleston and all the Atlantic cities. The benefits to be derived by you from the completion of these connecting links of communication, will be far greater than the most sanguine friends of your road can now anticipate, opening, as they will, direct railway communication with New Orleans, the North-western States and the Eastern cities.

All of which is respectfully submitted.

W. GOODMAN, Pres't.

#### Heavy Verdict against a Railroad Company.

Mr. Robert D. Ward has received a verdict of \$8,935 against the Buffalo and Erie Railroad Company, damages for the destruction of his hotel and furniture, which he claimed was set on fire by coals blown from a locomotive of the railroad company.

#### Northwestern Virginia Railroad.

We are informed that the track-laying on this road has already reached a point twelve miles from Grafton. The progress now making is about 4,000 feet per day, but with the aid of an additional engine, now on its way, the Superintendent expects to accomplish a mile per day from the eastern terminus. Another engine is on its way to Parkersburg, and from the time it reaches that point, about three-fourths of a mile per day can be laid at the Western end of the road. If these rates of progress can be maintained, and the skill

and energy of the Superintendent, Wm. D. Burton, Esq., gives assurance that they can, the road will be in full operation early in November, contracts having been made for all the iron required, and for the necessary rolling stock, deliverable by that time.—*Balt. Patriot*.

#### Railroads in Texas.

We learn that a bill authorizing a loan by the State to railroads has passed the House of Representatives of the State. The condition of the State loans are that fifty miles of road shall be graded, of which thirty-five miles must be complete before the company owning the road can avail itself of the State loan. The amount as fixed by the State is \$6,000 per mile.

#### General Freight Agent.

John J. Houston, Esq., has been appointed General Freight Agent of the Pittsburg, Fort Wayne and Chicago railroad. The Board of Directors and Management of the road have secured the service of a most efficient and thorough business man.—He will be able we predict, to conduct his department with credit to himself and satisfaction to the officers and stockholders of the road. We wish him, as he deserves, every success.—*Pittsburg Post*.

#### Coal-Burning Locomotive.

The Schenectady Locomotive Works have completed a coal-burning locomotive for a Western road. She has been run several days on the New York Central road, between Albany and Schenectady, with freight and passenger trains, and works admirably, making the time of express passenger trains with ease. The coal intended to be used in this engine is the Illinois and Ohio bituminous.—The coal used was Cumberland. The construction of the engine is similar to the ordinary wood-burning engine, with the exception of a large fire box, a shaking and dumping grate, and some minor differences. The consumption of coal is very moderate, being only 30 to 40 lbs. per mile when running with heavy freight or express trains.—*Exchange*.

#### Memphis City Bonds.

We learn that one hundred of the city bonds, for \$1,000 each, endorsed by the State, and issued for the benefit of the Memphis and Little Rock railroad, were sold yesterday at 93 cents on the dollar. Ex-Mayor Douglass, we understand, was the purchaser. The bonds have thirty years to run.—*Memphis Bulletin*.

#### Department of Practical Science,

#### UNION COLLEGE, SCHENECTADY, N. Y.

THE CIVIL ENGINEERING COURSE opens Sept. 5, 1856. The studies during the coming Term are *Draughting* by plans, elevations and sections; *Levelling*, applied to Topography, &c.; *Stability of Structures*; *Stereotomy*; *Road and Railroad*, with field-work; *Analytical Geometry*; *Optics*; *Electricity and Magnetism*; *German*. The entire course occupies two years.

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2, 20 Ton Locomotives } 4 ft. 8 1/2 in. gauge,  
4, 25 do. do. } at a bargain.  
6, 24 1/2 do. do.  
4, 26 do. do.  
Apply to DAVIS & KASSON,  
July 24, 1856. 4131 24 BROADWAY.

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TWO LOCOMOTIVE ENGINES, suitable for gravel or other light trains. The above machines are in good order and sold for want of use. Apply at the office of the CAMDEN AND ATLANTIC R. R. CO., 56 Walnut st., PHILADELPHIA, Penna. 32tf

#### Railroad Iron.

WE are prepared to contract to deliver Rails at fixed sterling prices, free on board, in English or Welsh ports, and also at prices including freight to New York or Boston. NAYLOR & CO., 99 and 101 John St., N. Y.

#### Brooklyn Water Works.

#### NOTICE TO MACHINISTS.

SEALED PROPOSALS will be received at the office of the undersigned until the 1st of October at noon, for the construction of two Pumping Engines, Cornish or equal to Cornish, for the Brooklyn Water Works, of capacity to raise Ten Millions (N. Y.) gallons daily each, 170 feet high, with three boilers each, to be built and erected complete on the stone foundations prepared for them, and to be of first class workmanship.

Drawings in detail accurately defining the style and character of engines and appurtenances to be submitted by the proposers, with description.

Specifications and further information may be had, at the office of the Chief Engineer, J. P. Kirkwood Esq., No. 4 Halsey's Buildings, Brooklyn, or of the undersigned.

The right is reserved to reject any of the proposals made.

H. E. WELLES & CO.,  
8132 No. 4 WALL ST., New York.

#### TO BRIDGE BUILDERS.

THE La Crosse and Milwaukee Railroad Company invites PROPOSALS with plans and specifications, until Wednesday noon, October 15th next, for building a bridge over the Wisconsin river on the line of their road. This road extends in a north-westerly direction, across the State, from Milwaukee on Lake Michigan to La Crosse on the Mississippi river crossing the Wisconsin river at Kilmour City in Columbia county. The river at this point runs in a rocky bed, the banks of which are vertical rock bluffs to the height of 80 feet above the water, at which point they are at the grade line of the road, and about 300 feet apart. The water is about 20 feet deep, having in the middle of the stream a few feet of sand overlying the rock bottom. It is proposed to erect two piers about 50 feet from either bank, at which points the water is about 5 feet deep at low water, with a clean rock bottom, giving a span in the middle of 200 feet, and two short spans at the ends, resting upon the natural rocks as abutments. It is desirable so to construct the bridge as to give a wagon way below the railroad track, passing the latter over the higher section of the bridge. The company reserve the right to award the contract to any parties on any plan furnished; but in case of their giving the contract to any builder on a plan furnished by any other person, they will pay to the person furnishing such plan, the sum of FIVE HUNDRED DOLLARS in full consideration of the plan and specifications so adopted.

BYRON KILBOURN,  
Pres't LaC. and Mil. R. B. Co.  
MILWAUKEE, August 1st, 1856. 10132

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A GOOD second hand Archambault Steam Engine, about 10 horse power, with tubular boiler complete. 4130 Apply to A. & P. ROBERTS, Philadelphia.

#### SALE OF THE Syracuse & Binghamton R.R.

SUPREME COURT.—David Hoadley & Horace White, Trustees for the First Mortgage Bondholders of the Syracuse and Binghamton Railroad Company, against the Syracuse and Binghamton Railroad Company and others.

In pursuance of a judgment of foreclosure and sale, entered in this action on the first day of August, 1856, there will be sold by me, or under my direction, at the Syracuse House, in the city of Syracuse, on the 20th day of September, 1856, at 10 o'clock in the forenoon, "All and singular the corporate property and franchises of the said Syracuse and Binghamton Railroad Company, consisting of all the lands, tracks, lines, rails, bridges, ways, buildings, piers and wharfs, erections, fences, walls, fixtures, privileges, franchises, rights and real estate whatsoever, and all the tolls, income, issues and profits to be had from the same, and all the railway depots or stations, with the buildings thereon, together with all the locomotives, tenders, cars, carriages, tools and machinery owned by said Syracuse and Binghamton Railroad Company, or any way belonging or appertaining to said road and used thereon, between the city of Syracuse and village of Binghamton, including 18 locomotive engines, tenders and fixtures, 10 locomotive lamps, 10 first class passenger cars, 3 second class passenger cars, 2 mail baggage and express cars, 3 baggage cars, with stoves and lamps in each, 80 box cars, 34 platform cars, 40 gravel cars, 8 hand cars, 1 large snow plow; also one stationary engine and boiler, 2 lathes, 1 wheel press, 1 upright drill, 40 feet line shafting, 8 bands and pulleys for same, 3 forges and bellows, 3 anvils and all the tools in the shop at Syracuse, and along the line of said road, and materials on hand for repairs and use of said road; also, 80 tons of iron rails, 20 tons of railroad chairs, 10 tons of rail spikes, 16 frogs, 8,000 cords of wood at various points along the line of said road, 12 hand trucks, 8 platform scales, 19 stoves, and all the furniture, books and blanks at the several stations and buildings along the line of said road; 120 lamps of various kinds, in use on trains, at stations, shops, and switches along the line of said road; also, the office furniture, consisting of two large desks, two tables and cases of pigeon holes, 3 iron safes, one draughting table, one case of drawers, 4 stoves, one ticket case and tickets in same, one regulator, sundry blanks, blank books and stationery for use of said Company."

A more complete inventory of property and description of premises to be sold, together with the maps and profiles, will be exhibited on the day of sale, and also the terms of sale will then and there be made known. Dated August 4th, 1856.

E. DAVIS NOXON, Referee.  
DAVIS & LEACH, Attorneys. 6133



## BROOKLYN WATER WORKS. To Contractors.

SEALED PROPOSALS will be received by the undersigned until the 15th day of August at 12 M. for the construction of the RIDGE HILL RESERVOIR, situated near the Jamaica road, about five miles from Brooklyn.

The work consists of earth-work, slope wall and puddling. Specifications and plans of the work will be shown on the ground and at the Engineer's office, Halsey's Building, Brooklyn, from the 6th August.

The right is reserved to reject any or all of the proposals made.

H. S. WELLES & CO.  
No. 4 Wall street, New York.

The above is postponed as follows:

Plans, Specifications, etc., will be ready on the 12th, and propositions received until the 20th, at 12 M.

3131

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1,000 TONS "New York and Erie" pattern, weighing about 67 lbs. per linear yard, on the way from English shipping port to New York. For sale by

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THE Engine is inside connected—4 ft. 8½ in. gauge—5½ ft. drivers—cylinders 14½ by 20 in. stroke. Independent cut off valve motion. Copper flues and fire sheets. Weight 20 tons. The above engine is nearly new, in fine condition, and in every respect a FIRST CLASS PASSENGER ENGINE.

For particulars address

ELLIOTT & BOWLES,  
118 William st., N. Y.

Also a second hand Engine of smaller capacity, for sale as above.

254f

## INTERESTING TO RAILROAD MEN.

A DIAGRAM has recently been published by G. H. HENSHAW, Civ. Engineer, of the practical organization of the New York and Erie Railroad. It shows in detail its entire physique in every department of the road. Such information in regard to one of the greatest railroads in the world must be deeply interesting to all connected with the management of such concerns. The impressions are on fine paper 31x45 inches. Price \$1 for thick or map paper and \$1.75 mounted on rollers. Those on map paper can be sent by mail.

Address JAMES W. HILTON,  
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## Notice to Contractors.

OFFICE OF STATE ENGINEER SUBSTANTIAL, Orange Mill Post Office.

St. Johns River, Fla., August 26th, 1856.

SEALED PROPOSALS will be received at this office until the 20th day of August, 1856, for constructing a Canal with its necessary appendages, such as Lift Locks, Guard Locks, Basins, &c., from Lake Harney on the St. Johns river, to Indian river, a distance of thirteen miles and 2,410 feet; authorized by the General Assembly of the State of Florida at its session of 1854 and '55, entitled "An Act to provide for and encourage a liberal system of Internal Improvements in this State."

Proposals will specify, the amount for which the work will be done; the mode and manner in which payments are to be made, whether in Lands, or Money, or portions of each.

Maps, Profiles, and Estimates can be seen at this office, and any information obtained by addressing the undersigned at "Orange Mill Post Office, St. Johns River, Florida."

Proposals will be received for constructing a RAILROAD over the same ground.

F. L. DANCY,  
State Engineer, State of Florida



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- 3d. The most economical pavement, because the wear and tear of both beasts and vehicles, of pleasure and burthen, are less upon it than upon any other in use.
- 4th. The most beautiful pavement to look upon, because the most cleanly and variegated, and free from dust.
- 5th. The easiest and least tiresome pavement to ride upon, because most even of surface.
- 6th. The least noisy pavement to use or reside near.
- 7th. The best pavement ever used, everything desirable considered.

This Company is enabled to furnish cities and others with an Iron Pavement for every use, at a reduced price. They will contract to lay it down upon any graded street, of superior strength, beauty, and perfection to that recently laid down in Boston, or that in Nassau street, fronting the Post Office, in this city, for

**\$5 to \$6.50 PER SUPERFICIAL YARD,**

in substitution for any existing pavement. This price is over \$4 per square yard less than the first laid down in Boston cost that city; AND \$1 LESS PER YARD THAN THAT RECENTLY LAID DOWN IN BOSTON COST; AND IS \$1 PER SQUARE YARD LESS THAN THE RUSS PAVEMENT HAS COST, that has so beautified, yet rendered most dangerous and expensive to man, and beast, and vehicle, a large extent of Broadway, and some other streets of New York city.

This pavement is also the best and cheapest for all railroad tracks, where horses are employed, and for all highway railroad crossings, now usually made of plank, which are subject to constant disorder and repair.

Lighter and less expensive patterns (averaging from \$1 TO \$3 PER YARD) are furnished for walks in public parks and grounds, also for side walks, private lanes, yards, foot-ways, cellars, and approaches to stables—each being most permanent, cleanly, and ornamental.

In every case ENTIRE SATISFACTION WILL BE GUARANTEED to all purchasers with whom contracts shall be made for laying down this pavement.

FOR A SMALL ANNUAL PER CENTAGE ON THE COST OF LAYING DOWN, CONTRACTS WILL ALSO BE MADE FOR KEEPING THIS PAVEMENT IN REPAIR FIVE, TEN, OR TWENTY YEARS, OR EVEN FOR A LONGER PERIOD.

The municipal authorities of cities, and directors of railroad companies, and all enterprising citizens who wish to blend utility with embellishment of their private grounds, residences, &c., are especially invited to investigate this subject. The surpassing usefulness of the Iron Pavement has been too well established in the public streets of Boston as well as in a section of Nassau street, in this city, to require experiment or argument to uphold it.

All additional information that may be desired will be promptly communicated, and orders promptly executed, by letter or in person, to the undersigned, GENERAL MANAGERS OF THE COMPANY'S BUSINESS, AT THEIR OFFICE IN THIS CITY, NOS. 8 AND 10 WALL STREET.

We are also allowed to refer for general information on the subject, to the gentlemen whose names are subjoined, as Honorary and Consulting Directors, not interested as shareholders in the Company's business.

### SMITH, ELEVETH & ROBINSON,

General Managers for the Iron Pavement  
and Street Railway Company

#### HONORARY AND CONSULTING DIRECTORS.

- HON. B. B. FRENCH, { Washington, D. C.  
CHARLES MONROE, Esq., {  
DAVID BURBANK, Esq., Baltimore, Md.  
JOHN J. SPEED, Esq., Detroit, Mich.  
HON. J. V. C. SMITH, Mayor of Boston, Mass.  
L. L. SADLER, Esq., Treasurer of Union Telegraph Company, Boston, Mass.  
HON. H. F. FRENCH, Associate Judge, Superior Court, Exeter, N. H.  
HON. JOHN M. WOOD, (Member of Congress,) Portland, Me.